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BY

MINNIE GOODNOW, R. N.

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FIRST-YEAR NURSING

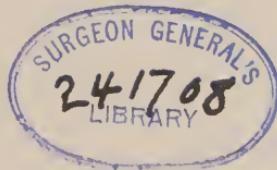
A TEXT-BOOK FOR PUPILS DURING
THEIR FIRST YEAR OF HOSPITAL WORK

BY

MINNIE GOODNOW, R. N.

FORMERLY SUPERINTENDENT OF THE WOMAN'S
HOSPITAL, DENVER, DIRECTRESS OF NURSES OF
MILWAUKEE COUNTY HOSPITAL, SUPERINTEND-
ENT OF BRONSON HOSPITAL, KALAMAZOO

THIRD EDITION, THOROUGHLY REVISED



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DEDICATED
TO
MY PUPIL NURSES

ACKNOWLEDGMENT.

THANKS are due to Miss Charlotte A. Aikens for valuable assistance in the outlining, arrangement, and working out of the details of this book, also for criticism and suggestions; to Miss Mary B. Eyre, Secretary of the Colorado Board of Nurse Examiners, for reading and criticism; to Miss Layman and the nurses of the Park Avenue Hospital of Denver, and to Miss Anderson and the nurses of the Baptist Hospital of Boston, who posed for a part of the illustrations; and to Miss Kinsey for reading and correction of the manuscript.

The following books have been used often and to advantage in the preparation of this volume: Primary Nursing Technic, by McIsaac; Nursing, Its Principles and Practice, by Hampton-Robb; Primary Studies for Nurses and Clinical Studies for Nurses, by Aikens; the Cyclopedias of Medicine and Surgery, by Gould and Pyle; Modern Methods in Nursing, by Sanders; and Practical Nursing, by Maxwell and Pope.

“Do unto others as you would have them do unto you.”

—JESUS CHRIST.

“Treat the patient, but do not forget to treat the man.”

—VIRCHOW.

PREFACE TO THE THIRD EDITION

FOR the third edition the text has been carefully scrutinized. Out-of-date material, such as the Brand bath for reducing temperature and Bier's hyperemia treatment, has been removed. Some new material has been added, notably the Carrel-Dakin treatment of wounds, the paraffin treatment of burns, and some explanation of occupational therapy.

Thanks are due for advice and suggestions from the instructors and chief nurses of the Worcester City Hospital, Worcester, Mass.; Addison Gilbert Hospital, Gloucester, Mass., and the State Sanitarium, Rutland, Mass.

MINNIE GOODNOW.

BOSTON, MASS.,
January, 1921.

PREFACE FOR TEACHERS.

IN presenting a text-book of practical nursing for the use of first-year pupils in hospitals, there has been no intention of attempting to displace or improve upon those already in the market. This work is put out at the request of a considerable number of training school superintendents for a book which should be a companion volume to Miss Charlotte Aikens' *Primary Studies for Nurses*, which is now in use in a large number of training schools. Effort has been made to have it fit in with that work, repeating little if anything which it contains, and then only when experience has shown that repetition for the sake of emphasis is desirable.

This is not designed to be a complete text-book of nursing, the more advanced work being purposely omitted, so that the work of the first year may be clearly defined. No attempt has been made to give any suggestions for use in district or private nursing. The nurse in her first year of hospital training is the one for whom the book is designed.

The criticism will doubtless be made that the chapters on the care of babies, obstetrics, and the operating-room are unnecessary. In theory, nurses do not do these things in their first year of training; but in actual practice, many hospitals, especially the smaller ones, are compelled to call upon their younger nurses for assistance in these lines of work. It is not uncommon for a pupil nurse during her first six months to care for medical, surgical, and obstetrical patients in hospitals where conditions do not permit careful classification and separation of patients.

Each chapter is complete in itself, so that any rearrangement which may be desired can easily be made. For

example, the chapter on the night nurse may come earlier, the chapter on bandaging later. The chapters on bed-making, baths, and enemata and douches may be divided into two lessons. Some schools may wish to omit entirely the chapters on obstetrics and the operating-room.

Effort has been made to follow the course outlined by the Training School Committee of the American Hospital Association. Where the work given has encroached upon their outline for the second and third years, the matter has been made as brief as possible, covering only fundamentals, and leaving details to be given later.

The following is the work recommended by that Committee to be given during the first year of training:

Practice and theory of nursing.

Disinfection, sterilization, and protection against bacterial diseases.

Study of common drugs and their administration.

Dietetics: Classification of foods, care of foods, cooking of foods, serving of foods.

Hospital ethics.

Household economy.

Hygiene and sanitation.

Bandages and dressings.

Elementary study of anatomy and physiology.

General medical and surgical nursing.

Ward and bedside clinics and demonstrations.

The clinics and demonstrations which they recommend are as follows:

Beds; bedding; bed-making, with and without patient; management of helpless patients; changing beds; bed-making for operative patients; rubber cushions; bed rests; cradles; arrangement of pillows, etc.; substitutes for hospital appliances.

Sweeping; dusting; preparing room for patient; disinfection of bedding: furniture, etc.; care of patients' clothing in wards and private rooms; disinfection of infected clothing.

Care of linen rooms; refrigerators; bath rooms and appliances, sinks; hoppers; bath-tubs, etc.

Baths—full sponge, to reduce temperatures; foot baths; vapor baths; hot and cold packs.

Administration of rectal injections, for laxative, nutritive, stimulating, astringent purposes; care of appliances; disinfection of excreta.

Vaginal douches; methods of sterilizing appliances; use and care of catheters; vesical douches; rectal and colonic irrigations.

Local hot and cold applications; making of poultices; fomentations, compresses; methods of application; care of hot-water bottles; uses and care of ice-caps and coils.

Chart keeping; methods of recording bedside observations.

Making of bandages—roller, many-tailed, plaster, abdominal, breast; pneumonia jackets.

Methods of applying roller bandages.

Methods of applying other bandages.

Appliances to prepare for ward examinations and dressings, sterilization of ward instruments; nurses' duties during dressings.

Preparation of patients for operation; hand disinfection.

Preparation and care of surgical dressings, sponges, etc.

Tray setting and food serving; feeding of helpless and delirious patients; management of liquid diet.

Administration of medicines; methods of giving pills, tablets, capsules, oils, fluids; application of plasters, ointments, etc.; use and care of medicine droppers and minim glasses, atomizers, inhalers, hypodermic syringes, etc.; management of inhalations, eye drops, suppositories, etc.

Care of the dead.

Symptomatology—the pulse; correct methods of examining the pulse; volume, tension, rhythm, rate, etc.; effect of exercise, emotions, baths, drugs, shock and hemorrhage.

The face in disease—the skin; expression, eyes, mouth,

teeth, etc.; variations from normal; care of mouth and teeth; general observations of the body.

Respiration—normal and in respiratory affections.

Pneumonia—respiration, cough, and sputum; crisis and lysis explained and charts shown.

Typhoid fever—face, rose spots, temperature charts, changes in temperature and pulse explained; danger signals; prophylactic measures; methods of managing delirious patients, proper restraint, etc.

Specimens of excreta—urine, sputum, feces, etc., nurses' duties regarding each; importance and general management.

MINNIE GOODNOW.

BOSTON, MASS.,

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FIRST YEAR NURSING

CHAPTER I

ETHICS

“The common problem, yours, mine, everyone’s,
Is, not to fancy what were fair in life,
Provided it could be,—but finding first
What may be, then find how to make it fair
Up to our means.”—ROBERT BROWNING.

Nursing Ethics.—*Ethics is defined as the science of conduct.* A science is a set of principles deduced from facts. We may say therefore that Nursing Ethics gives us *the principles of conduct which should govern our actions in the pursuit of our chosen profession.*

Hospital conditions are not those of ordinary life. In nursing, we deal with the unusual and the abnormal. We cannot, therefore, expect to apply to it the rules which govern our home or business life.

Hospital workers have, after years of contact with sick persons and their friends, formulated certain principles of conduct in connection with them, and have universally adopted those which work out to the comfort and advantage of all concerned. The young nurse will do well to bear in mind that the accepted principles of nursing ethics have been not only carefully thought out, but tested over and over again in actual life; so that her attitude should be that of the child that obeys at first because it must and later because it has seen the reasons for obedience.

One point is noteworthy, because it has produced much confusion in the minds of those who are beginning

their career as nurses. Many of us have been taught that we ought to do our part in reforming the world. Within the walls of the hospital we find that we must accept all people as they are, and devote ourselves mainly to their physical betterment. This is right, because our dealings are only with the unusual, also because we have too much else to do, and certainly because reform is not now our business. To accept people and conditions as they are and to do our best with them is our present business and needs our entire attention.

Nursing a Profession.—It is pretty generally conceded that nursing is a profession, and the nurse should bear in mind that her work is therefore upon a distinctly higher plane than that of an ordinary occupation. More is, and ought to be, expected of her, and if she is not willing to attempt to carry out the program which is set before her, she would better choose some other work.

The actual work done by a nurse can be learned by a person of ordinary intelligence; but the fine art of nursing is a thing which requires special fitness, special and long training, and determined application. We hear of the "born" nurse. There is no such person, though we may by courtesy apply the term to her who by her interest, enthusiasm, faithfulness, diligence and loving spirit, puts the work of caring for the sick among the professions. She may have talent for nursing, as a painter or musician has talent for art or music, but she must, as they do, possess the determination which makes her go through years of training in the technic and spirit of her art.

Qualities Requisite for a Nurse.—Two of the qualities for which superintendents of training schools most often look in accepting a probationer are *good breeding* and *teachableness*. These produce the proper spirit, which is the foundation. If later the nurse is found lacking in the spirit of obedience and truthfulness, is inaccurate or unobservant, or fails in loyalty, she cannot be considered a success.

The following blank suggests some of the points which head nurses and superintendents take into consideration in accepting or rejecting a probationer, or in grading the work of nurses.

NURSE'S RECORD

Name.....	
Punctuality.....	
Character of work.....	
Kindness and attention to patients.....	
Economy.....	
Personal neatness.....	
Neatness in work.....	
Power of observation.....	
Interest displayed.....	
Executive ability.....	
General deportment.....	
Improvement.....	

Signed..... Supt. of Nurses.

The Patient the Chief Consideration.—The one fact which should never be lost sight of is that *the patient is the main thing*. In the nurse's anxiety to do well in her studies, her concern to please the doctor and to avoid criticism from the head nurse, she may forget that the patient is the reason for it all, that without the sick person there would be no hospital, no doctors, no training. The patient is therefore the unit, the one chief consideration, the one to whose welfare all else must be subordinated. The moment this fact is put into the background, that moment nursing drops to a low plane, and is unsatisfactory both to the one who does it and to the one for whom it is done.

Military Discipline.—The organization and discipline of the hospital resembles that of the army. The so-called military discipline may be criticised or by some condemned, but it must continue to hold sway, for the reason that in a hospital as in war *human life is at stake*. A mistake in ordinary life may be but an annoyance or an inconvenience; in a hospital it invariably involves life or health, and one cannot afford to take chances. The simple fact that a mistake had no serious conse-

quences is not an exoneration; if it could have had serious consequences, there is every reason for its being prevented, or when it has occurred being punished with severity. Human nature needs restraint in order to produce perfect results, and in hospital work our results should be as nearly perfect as they can be made.

Obedience.—The primary principle of military discipline is unquestioning obedience to superiors. This involves a formal etiquette. It embraces a strict code of honor, with punishment for its violation seemingly out of proportion to the offence.

When an order has been given, it must be carried out with promptness and accuracy. If for any reason it cannot be done, that fact should be immediately reported to the proper authority with the reason assigned.

Truthfulness.—If a nurse makes a mistake, it is not only the honorable but the wise course for her to report it without delay. Much may depend upon the promptness with which the mistake may be set right. It is certainly far better to confess an error than to wait for it to be found out. Any young woman who is unconscientious enough to risk a patient's well-being in order to avoid a reprimand, or who is willing to take the chance of an error remaining undiscovered, is not the sort of a woman for a nurse.

Perfect honesty in writing records and in making reports is also demanded. An inaccurate statement or a suppression of facts may result in great injury to the patient. A matter which seems of minor importance to a young nurse may be a vital thing in the case; in view of her inexperience, she cannot be a proper judge of consequences, and the only thing for her to do is to be absolutely honest and accurate.

The Nurse's Duty to the Board of Directors.—The pupil nurse should feel her responsibility to the hospital Board. She should remember that they bear the brunt of criticism, both from the hospital employee and from the public. They are legally responsible for whatever

occurs in the hospital; the carelessness of an employee may lay them open to public condemnation, or the mistake made by a probationer may involve them in a suit for damages.

Duty to the Superintendent of the Hospital.—The superintendent is likewise between two fires; the public must have justice done, and the hospital organization must not be imposed upon; also, in most American hospitals, the financial responsibility is no small matter. Here again, the pupil nurse must remember that an act or an omission of hers may make serious trouble at headquarters.

Duty to the Superintendent of Nurses.—The superintendent of nurses is held directly responsible for the conduct of each individual nurse under her. If she retains an unsatisfactory pupil, she is subjected to a fire of criticism from the patient and his friends, the doctor, the superintendent, and the board. A minor offence on the part of a nurse, such as an improperly served meal or a lack of courtesy to a stranger, reflects upon her rather than upon the offender. If a nurse is careless, the question is always, "Why does the hospital keep her?" If she is untruthful, the superintendent of nurses is credited with approving the falsehood.

The young nurse may find it difficult to adapt herself to institutional life. She finds that exceptions cannot be made, that if a privilege is allowed to one person, the same must be accorded to all who are in the same position. She must learn to realize that her rights are *those things only which can with justice to all be permitted to every nurse in the training school.* Her standard for judging the acts of her superiors must be, "What would be the result if every nurse in the hospital were allowed to do this?"

Relations not Social.—Especially must she remember that while on duty her relations to those about her are not social but professional. Her attitude to everyone with whom she deals should be in accordance with this

principle, and patients, doctors, nurses, and employees should come into its scope. *Self-control, dignity, and courtesy* should characterize her manner and her work.

Doctors.—To the doctor should be accorded the respect due a superior officer. Absolute loyalty must be given him, whether the nurse has confidence in him or not. She must not, by word or look, reveal to the patient any animosity which she may feel toward him or his methods; she may have misjudged him, and have reason later to change her mind. Whatever her personal opinion, it is not within the province of a nurse to criticise a doctor's ability or lack of it.

The nurse should stand while speaking with a doctor or taking an order from him. She should follow, not precede him. She should not state to him her opinions, nor should she make remarks unless requested. No matter how well acquainted with the doctor she may be, she may not indulge in general conversation with him; patients and visitors are sure to misinterpret anything which approaches familiarity between doctors and nurses.

Internes.—Especially must she be on her guard in her contact with the internes. Their work is so closely connected with hers, and she becomes from the fact of common interest so well acquainted with them, that it is hard to maintain the aloofness demanded of her. If she will keep in mind the patient's viewpoint, and think how her actions would appear were she the stranger in a hospital bed, it will help her to exercise the necessary self-control. Any man of the right sort will honor her the more if she refuses to break rules for him or to indulge in familiarities while on duty.

Other Employees.—All orderlies, maids, cooks, and other employees are in a different class from the nurse, and any social intimacy is forbidden. Servants may be your intellectual equals, but they are not upon the same plane when on duty. On the other hand, their work may be no more menial than yours, and you have no occasion

for discourtesy toward them. Because the nurse is considered to be in a superior class, she should not lower herself to criticise harshly or quarrel with servants; if she does this, she drops below their level, and is sure to be treated by them with incivility. Any complaint concerning a servant should be taken to the superintendent of nurses; if it is not important enough for this, it is not worth noticing.

Visitors.—Visitors who come into the hospital should be treated as you would the guests of a friend who is stopping with you. They may interrupt your work or annoy you when you are struggling with extra duties, but that is no reason for impoliteness or brusqueness. Rise to receive visitors, answer all questions courteously, show them to the person whom they are seeking, and if necessary tell them how long they may remain. If they transgress rules, take the position that they are ignorant of or misinterpret them, and explain kindly but firmly what the institution expects. Any differences must be referred to the office, never handled by a pupil nurse.

Patients.—The patient, whose welfare is the object of the hospital's existence and of the nurse's training, should be treated with unvarying *courtesy, sympathy, and interest*. He may be your inferior intellectually and socially, but he is the guest of the institution; more than that, he is a human being in need, and no thinking woman can be aught but considerate to a suffering fellow mortal.

Familiarity.—Guard against familiarity with patients; it is always productive of untoward results. No matter how sorry you may be for a woman, do not attempt to show it by calling her "Dear." Do not allow her to lay aside too many of the formalities with you. Never ask a patient personal questions. Do not respond to personal inquiries; say quietly that you are not expected to talk about yourself.

Knock before entering a patient's room, and wait long enough to hear the response; the strict observance of this

rule will save both you and the patient many chances for embarrassment. Respect the patient's right to a measure of privacy.

Do not leave a woman patient alone with an interne, nor with the attending physician until you have made sure that all work connected with the case is finished. On the other hand, the nurse should be keen enough to see without being told when a patient wishes to have a private conversation with her own doctor, and should leave the room at the opportune moment. She is entitled to your chaperonage, however, at all other times.

Do not sit on a patient's bed. It is uncomfortable for her, and has an undisciplined air about it. Do not sit down in a patient's room for the purpose of entertaining her; cheerful conversation while you are working is quite in place, but a nurse should be too much occupied to spend her time in mere diversion; work is sure to be neglected if she indulges in this practice.

Consideration.—Be considerate. Do not insist upon your way, but whenever it is at all possible, permit a patient to do as he pleases. He may be foolish and may be aware of it, but he is childish just because he is sick, and his own way looks very attractive to him; so, unless it is a matter of vital importance, defer to his wishes. When you find it really necessary to insist, he will agree to it all the more readily because he realizes that it is necessary.

Contradicting.—Never contradict a patient's statement in his presence. If he says what you believe to be untrue, you can give your view of it when outside the sick-room. Doctors are aware that sick people make mistakes, are inaccurate, and have distorted views; they make allowances for it. It is not necessary that the patient himself admit it.

Manner.—Avoid a hurried manner. You may work quickly, but the moment a suggestion of haste creeps in, the keen eye of the patient interprets it as lack of interest, which in truth it is, being plainly disregard for the matter

in hand and seeking for something outside. Sick persons are selfish, and like to feel that a nurse wants to care for them. She, who conveys the impression that the person before her at the present time is the all-important consideration, will be praised, when equally thorough and faithful work done with an abstracted or hasty manner will be construed as nothing less than downright neglect. The criticism is all too common, "The nurse didn't seem to want to do this for me." The patient cannot know and the nurse cannot explain that she has three or four other persons waiting for her, and she must make haste by giving her undivided attention to the matter in hand.

Distinction between Persons.—Make no distinction between rich and poor, between attractive and unattractive persons. You cannot like all patients equally well, but you need not let it appear in your manner. It is suffering humanity which you have before you, and your business is not to judge them, but to care for them. If you cannot bring yourself to this way of thinking and acting, you may question whether you have not mistaken your calling.

Expression of Emotion.—Train your face to express or not express emotion, as you will it. A nurse whose face is an open book is likely to be the occasion of much discomfort or even disaster. You may have a headache, but that is no reason for inflicting a sour look upon a patient; you have just heard a very funny story, but that is no excuse for a frivolous manner with a seriously ill person; you may have just come from a death-bed, but you must not carry its depression to one who is joyous because of returning health. Self-control in all things is one of the finest fruits of a nurse's training.

Voice.—Strive for control of voice. Try not only to subdue loud tones, but pay some attention to the quality. A harsh, rasping voice need not be loud to be annoying; and indistinct, slovenly speech is quite as disagreeable as a voice which can be heard over an entire floor. A

little watching of yourself and a little study of other people will help much toward remedying such defects.

Noise.—Hospital noise consists of rattling of dishes and utensils, closing of doors, moving of chairs and other furniture, the sound of feet upon the floor, the voices of nurses, doctors, patients and employees, the moaning of patients in pain or delirium, the passing of wagons and people on the street, etc. Many of these sources of noise are not under the control of the nurse, but about one-third of them are; if each nurse will see that the portion for which she is responsible is eliminated, the hospital quiet which should exist will soon be in evidence. Care and dexterity in handling apparatus, muscular control in walking, shutting doors, etc., will help much. Experience proves that most people are very patient about necessary noise, and are annoyed chiefly by noise which seems to them to be needless.

Truthfulness with Patients.—Be honest with your patient. Nurses commonly and all too quickly fall into the way of thinking that it is not only permissible but right to tell untruths to patients. It seems sometimes difficult to the young nurse to know how to answer a patient's question without lying or being brutally frank. If she will begin right, and give each one to understand that it is not in her province to answer questions, she will find the difficulties fewer than she had fancied. A pupil nurse has the great advantage of being always able to refer a matter to the doctor or head nurse. She may also rest secure in the fact that "I do not know" is more often than she thinks the correct answer; she may think her judgment or information accurate only to find later that she is entirely wrong. Silence on her part is the wise course, but never untruth. The best men and women in the profession hold that *it is never necessary to lie to a patient.*

Guarding Confidences.—Any fact concerning a patient which a nurse learns in the course of her work, or any matter which the patient may confide to her, must not

be spoken of outside, even to other nurses. The nurse of necessity encounters the family skeleton; she may not wish to know the patient's personal affairs and the patient may not wish to have her know them, but she is bound to find them out; for this reason it is a point of honor that they be kept inviolate; she must not even let it be known that she knows them. The reason for this secrecy is obvious when one sits down and thinks what would be the result if family matters became known through her. It may be that a patient, in a moment of weakness or loneliness has told a nurse things which were better left unsaid; even though she may not have asked that the confidence be respected, she assumes that it will. To a patient, there is no greater wrong than for a nurse to reveal a secret or to betray a confidence.

Relations with Men.—The nurse's relations with men patients and with men who are relatives or friends of patients must be carefully guarded. She must accept hospital conditions and realize from the beginning that she cannot act by the same standards which she uses in common life. While on duty, she is in the public eye and must make her conduct such that it cannot be misunderstood. Many things which are innocent enough of themselves give to an outsider the impression of carelessness or familiarity. The nurse's position in regard to a man for whom she is caring is a difficult one, and one which has no counterpart in ordinary life; she must therefore see to it that her manner and her actions are above reproach. Thoughtlessness on her part, a careless word or manner, though coming from a clean and innocent mind, may be misconstrued and may be the occasion of serious complications. The nurse must maintain a dignity which will compel any man, whether he be a gentleman or not, to respect her.

Most hospitals have found it wise not to allow their nurses to receive attentions from former patients. This seems in some instances a hardship, but in the end it works out to the advantage of all. Here again the nurse

must yield to the necessities of institutional life, and remember that whatever she does is going to be considered by the public the standard of the hospital.

The Nurse's Appearance.—The nurse must make her personal appearance the subject of extreme care. Every moment of her time on duty she is on dress parade, every detail of her dress and bearing is subjected to inspection and criticism, and the patient's final judgment of her is made up of very small considerations. This judgment is bound to be told outside, and will reflect not only upon the institution, but upon the whole nursing profession.

Neatness.—She must be neat to the point of immaculateness. Her dress must have no rip, no tear, no worn place, no frayed edge. It must fit her properly, and be loose enough to work in without the slightest pulling. Shields should be worn if there is the slightest need for them, as nothing is more disgusting to a patient than a perspiration-stained dress. Skirt and waist must join neatly and stay together. Petticoats must be neither too long nor too short. The skirts should clear the ground well, but be long enough to be modest when bending over a bed.

The nurse's mode of dressing her hair will probably be prescribed by the school. The hair should be smooth and neat, not tightly drawn, but free from straying, untidy ends and fanciful or elaborate arrangement not in keeping with the dignity of her work. The hair should be washed frequently, as it collects filth and germs much more rapidly in the hospital than it does in a home.

The nurse should take a daily bath. When she thinks of the cases which she has to handle, she will do it for her own sake; for the patient's sake, she should have about her an air of positive daintiness; no odor of perspiration should there be, not a suggestion on her breath of disordered digestion or uncared-for teeth, nor should there be any perfume to hint that she is attempting by its means to cover up a lack of cleanliness. Digestive disturbances are caused by rapid eating, insufficient

mastication of food, unwholesome "off-duty" lunches, thinking too much of one's work while at meals, etc.; all such things should be avoided. Well-brushed teeth, a clean mouth, a well-cared-for digestion, a clean skin, tidy hair, smooth hands with nails showing proper attention, and whole, clean clothing are as little as should be expected of a nurse who has self-respect.

The young nurse finds it difficult to do some of her work without soiling her clothing; she should, however, learn as soon as possible to keep herself clean no matter what her work is.

Care of Feet.—The nurse must take particular care of her feet. Smooth, comfortable stockings, not too small, and properly fitted shoes are all-important. The shape of the heel has a great deal to do with the fit and comfort of a shoe, and a nurse should never be guilty of sacrificing comfort to a desire to follow the latest fads. Most persons need a shoe which supports the ankle, and the proper support of the arch of the foot should be looked after.

If the nurse finds that her feet become more tired than is warranted or that they pain her, she should report the matter to the superintendent of nurses that it may be attended to. Flat-foot (the breaking down of the arch) is common among nurses; if taken early, it is easily corrected; if neglected, it occasions much suffering.

Outside Interests.—In the matter of interests outside the training school, a nurse should endeavor to find and keep the golden mean. She should not think and talk "shop" to the exclusion of all other topics, nor should she find outside things so absorbing as to take her mind from her work. As a rule, nurses think of their work too much rather than too little, and effort should be made to overcome this tendency. Think what three years of excluding outside affairs may mean, and resolve that you will not get out of touch with the world. Spend five minutes a day on the daily paper, read a book at least once in two months, go to church once a week, and to a concert, lecture, or entertainment at

least once a month. This will serve to keep one in contact with other people, yet not cause her to neglect her work or studies.

Spirit of the Work.—In your work, be ready to do more than is exacted of you. Consider your work as opportunity, and bear in mind that the harder it is the more training you are getting. The plan of keeping a personal record of one's work is a satisfaction, if nothing more. If a nurse is able to tell at the end of her course how many surgical cases she has cared for, how many typhoids or other medical cases, how many deliveries she has seen, how many surgical operations she has assisted with, how many babies she has cared for, etc., it will at least indicate interest and pride in her work. Then, if a nurse is asked to do extra duty, it will mean to her added opportunity, more actual accomplishment, more items to her credit.

There is much criticism of the so-called *commercialism* of the graduate nurse. This is a thing to be striven against from the beginning of one's training, because modern life tends to implant the idea that success can be measured by money. Easy cases among wealthy people help to confirm this notion. The young nurse should struggle to retain the ideal with which she entered training, that of service to humanity. She will find that her real satisfaction comes from good work, well done, in a spirit which brings the love and confidence of her patients and their families.

Quality of Work.—Finally, let the quality of your work be your chief pride. Take pride in being systematic, in working easily. The nurse who makes her work hard and causes it to appear like drudgery may get some sympathy, but she commands scant respect; while she who does menial tasks as though they were pleasures, encounters difficulties with a cheery face, is immaculate about both the greatest and the smallest parts of her work, and demonstrates that order is heaven's first law, will command the admiration of both those who are keen

enough to understand and of those who can only wonder at her skill.

Never be content with half-way or fairly good work. Make it your best. Let each task be a finished piece of work, each undertaking a model of neatness and orderliness. Then shall nursing be not hard work, but a *fine art*.

REVIEW QUESTIONS

What is nursing ethics? How were its principles obtained?

Name some of the essential qualities for a nurse.

In a hospital, who is the chief person to be considered?

Why has strict discipline been adopted in hospitals?

What is the fundamental principle of hospital discipline?

Why should a pupil nurse in her acts consider the Board of Directors? The Superintendent of the hospital? The Superintendent of Nurses?

Mention three qualities which should characterize the nurse's relation to those about her.

What should be a nurse's attitude toward a doctor? Discuss.

What should be her attitude toward hospital employees?

Give important points in the nurse's relation to patients and discuss each.

Why is a hurried manner objectionable?

Why should a nurse control her expression of emotion?

What are the causes of noise in hospitals, and what noises are especially annoying?

Is it right to tell an untruth to a patient?

Why should a nurse be especially careful of her manner toward men?

Discuss the importance of the nurse's personal appearance.

What are some causes of digestive disturbance?

What sort of shoes should a nurse wear? What should be done about sore and painful feet?

Should a nurse have interests outside the hospital?

What is the value of finished work?

What should be the spirit of a nurse's work?

CHAPTER II

CLEANING. FUMIGATION. VENTILATION

“So clean that it cannot be cleaner.”

CLEANING

Demonstrations.—Sweeping. Dusting. Fumigation. Care of bath-room fixtures. Disinfection of linen. Care of refrigerators. Arrangements for ventilation.

Importance of Cleanliness.—One of the first lessons a nurse must learn is that of scrupulous cleanliness. Ordinary household cleanliness is not sufficient in a hospital. In our homes we clean largely for the sake of appearance; in the hospital, cleaning is done for the safety of the patient.

We know, from the study of Bacteriology, that microbes or germs are present everywhere, in the air, in the dust, upon food, upon our hands, clothing, etc. Many of these germs are harmless, many are beneficial. In a hospital or sick-room, however, there are present many disease germs which are not only a menace to the well, but which if allowed to remain and grow may prevent or retard the recovery of the sick person. This is the reason why everything about a hospital should be more than ordinarily clean.

Composition of Dust.—Hospital dust consists of particles of dirt blown in from the street containing germs dropped by animals, etc., lint from the bedding, scales from the skin, dandruff from the head, dried throat and nasal secretion, particles of dried excreta, and many other substances both disagreeable and dangerous. If these are frequently and thoroughly removed, and the

patient kept with clean body, clean bed, and clean surroundings, his chance for speedy and complete recovery is far better than it would be otherwise.

One can readily see, therefore, that moving dirt from one place to another, as with a feather duster, or cleaning simply for the sake of appearance, is quite insufficient in a hospital. The germ-laden dust must be entirely removed, and the germs either killed or placed where they cannot grow. Dry cleaning is ineffective because it does not remove the germs; they are microscopic in size and slip between the straws of a broom or brush or the feathers in a duster. If collected upon a damp cloth they adhere and may be taken care of. It is with this in view also that we use disinfectants in cleaning, not only removing the germs, but at the same time rendering them harmless.

Surgical Cleanliness.—When we speak of surgical cleanliness, we mean entire freedom from germs of any sort. This condition may be obtained by boiling or steaming, by the use of disinfectants, or by mechanical cleansing. Direct sunshine also aids in destroying or preventing the growth of germs.

Boiling is the simplest and most certain method of destroying germs, and should be used when it is at all possible; the boiling should last ten minutes in order to be effective; scalding or boiling for a few minutes will kill some germs and prevent the growth of some, but cannot be considered a thorough process.

In the use of disinfectants, strong solutions are necessary and time must be allowed for them to do their work; hot solutions are more effective than cold.

Mechanical cleansing is applicable only to smooth surfaces, and even then is only partial. For example, in cleaning our hands, we remove as many of the germs as we can with a brush or with gauze, using running water so that the dirt may be washed into the sewer; for the broad surfaces of hands and arms this scrubbing is quite satisfactory, but for the rough places and corners

about the nails, it must be done repeatedly in order to be even approximately effective. Even after soaking the hands in disinfectant, there may be germs lurking in corners which may with movements or perspiration come to the surface and be a source of infection. It is for this reason that surgeons have come to use rubber gloves (which can be sterilized by boiling) as an additional safeguard in handling wounds, etc.

Arrangement of the Work of Cleaning.—In private nursing the nurse is personally responsible for the cleaning of her patient's room, and except in families where several servants are kept, is expected to do it herself. Servants are apt to annoy a sick person, and they rarely know how to clean properly. A maid cleans only for appearance's sake; a nurse cleans in accordance with the underlying scientific principles. A certain doctor was accustomed to say to his nurses, "If you cannot do work better than a servant does it, you are no better than a servant."

In most hospitals, the floors and rugs of the wards and rooms are cleaned daily by a maid or porter, the nurse being held responsible for the dusting. The same arrangement prevails in regard to bath-rooms, lavatories, etc. Some hospitals have the nurses do all the cleaning in the rooms of very ill patients, allowing the maid to come in only when they are convalescent.

Sweeping.—Dry sweeping with a broom on bare floors is both unsanitary and ineffective. A soft bristle brush collects and removes more of the dust and does not scatter it into the air. There are vacuum cleaners which may be used successfully on a bare floor; for hospital use, these need a man to run them.

One may employ a sweeping powder; this assists materially in preventing the dust from flying about; or scraps of dampened newspaper, tea leaves, etc., may be scattered over the floor before sweeping. It has been proven by bacteriological experiments that sweeping done with sawdust moistened with 2 per cent. carbolic

solution gives the best results, *i.e.*, that there are fewer germs thrown into the air by the process.

In private homes where there are carpets any of the above methods may be used, except that one must use a broom instead of a brush.

Always begin to sweep at the edges of the room, and work toward the center and toward the door.



FIG. 1.—Sweeping with damp cloth over broom.—(*Aikens' "Home Nurse's Handbook of Practical Nursing."*)

Wiping Floors.—After the bulk of the visible dirt is removed by one means or another, the floor should be wiped, so that any bacteria, which are far too small to be taken up by a dry process, may be caught on a damp surface and carried away. For temporary cleaning, a damp cloth fastened over a broom is excellent; it enables one to get into corners and removes the dust with very

little effort. Usually a mop or wet cloth is used, and if the cleaning is done daily, only clear water is necessary. (Most maids do not change the water often enough in cleaning floors.) Soap should not be used on wood floors, as it ruins any finish which may be on them. Mosaic, tile, cement, or composition floors usually need soap. Linoleum should be cleaned with clear water.

Theoretically, a disinfectant should be used upon hospital floors, but it is destructive to any wood finish, and in actual practice ordinary damp cleaning is about as effective.

Great care should be taken not to mar wood or linoleum floors by dragging over them a broken caster or anything with a sharp edge. In linoleum especially a dent or cut remains as a permanent blemish.

Cleaning Rugs.—Rugs should be hung on a line out of doors and beaten. A wicker beater is best, as a wire one cuts the threads. Rugs may be shaken, but shaking wears them out rapidly, soils the hands, hair, and clothing of the person who does it. Rugs should be cleaned daily.

Hospital rugs should be of a material which can be washed. There are the "Shaker" rugs woven like rag carpet, those similar to ordinary wool rugs but of cotton, or there are the Navajo Indian blankets which can be washed in cold water and which last a lifetime. If the rugs are not washable, they should be sent to the cleaners frequently.

Many accidents to handsome rugs could be avoided if nurses would push them away from the bedside when they begin a douche, enema, or surgical dressing. It takes but a moment to remove or to replace them, while accidents are expensive and annoying.

Dusting.—Dusting in the hospital sense of the word means removing all dust from the room, not simply pushing it from one place to another. To be of any real use, it must be done with a damp cloth. A disinfecting solution is advised, but can be used only on iron or glass

furniture. Varnished or oil-finished furniture must be wiped with a cloth which is merely damp, not wet.

How to Dust.—Begin with the dresser, chairs, and articles made of wood, having the cloth just damp enough to collect the dust. Everything on the dresser should be removed and each individual piece wiped off. The tables and washstand should be gone over in the same way; any panels or creases should be dusted, the legs, back of dresser and washstand, top of mirror, towel rack, etc. By this time, the duster will require rinsing; when wrung as dry as possible, go over the pictures, the top of the base-board, the window sills, door panels, etc. The bed may then be done, with the cloth quite wet, unless the bed is of brass, when a cloth but slightly damp should be used. In dusting a bed, do not overlook the side rails as they are often most in need of it, but being out of sight are apt to be forgotten.

Putting the Room in Order.—As dusting progresses, each piece of furniture should be set in its place. It takes no longer to put a chair where it belongs than where it does not belong, and it is a saving of time to handle furniture once rather than twice.

When you think that you have the room in order, look at it. You will often discover a glaring fault which can be remedied with an instant's work. There may be a sheet corner hanging, a picture or curtain crooked, a chair out of place, or the bed not quite straight. In a ward, be sure that the beds are in line; that the bedside tables are in their exact places; that the window-shades are on a level, etc. Irregularly placed or uneven furniture makes a ward look untidy when it is otherwise in perfect order.

Observation.—One of the marks of a good nurse is her ability to see things. This power can be cultivated from the first day in the hospital. If you cannot see a dirty spoon on a table or a bedspread which is awry, you will hardly be able to recognize the fine points of change in a

patient's condition which are so often important danger signals.

Articles for Repair.—The nurse should form a habit of noticing anything in a room which is out of repair, and should immediately report it to the proper authority. If it is not attended to by the next day, it should be again reported. No superintendent or house-keeper can personally examine every appliance or piece of furniture often enough to know its condition; they must depend upon the nurses for these details. So it is that the comfort of the patient and the reputation of the hospital often depend upon the individual nurse, even in such matters as a loose chair-rocker, a defective bell-cord or door-latch.

Care of Plants and Flowers.—Plants and flowers are usually set out of the rooms and wards during the night. After the morning dusting is done, they should be cared for and taken back to the patients. Each vase should be emptied, the withered flowers removed, and fresh water put in. Most flowers keep better if the stems are cut off a trifle each day, doing it under water so that the cut will fill with water and not with air.

Arranging Flowers.—Do not be guilty of putting more than one sort of flowers into a vase, unless they have come in a made-up bouquet. Arrange all flowers loosely, and try as far as you can to select a vase of suitable size and shape. Get the stems well into the water, but not so far down as to spoil the effect of the arrangement.

Watering Plants.—Potted plants with many blooms or broad leaves need a great deal of water. Azaleas and cyclamens in particular should be kept well soaked. Few things give a worse impression than for a nurse to allow a beautiful plant to wither for want of water.

Be careful where flowers are placed, both when they are in the room and when they are set out for the night. See that they are not near a radiator or register and become overheated. Do not leave them near an open

window, for in cool weather they are almost sure to freeze, and at any time a wind may come up suddenly, knocking over and ruining them before they can be rescued. Remember that each plant or flower is the expression of some person's regard for another, and treat it with the care it deserves.

Cleaning When a Patient Leaves.—When a patient is discharged, his bed or room is given a special cleaning. If a ward bed is vacated, the mattress should be put out of doors to air and sun, or—if the case was not a clean one—sent to be fumigated. The woven wire springs should be brushed with a whisk-broom, and may if the head nurse approves have carbolic solution applied to them. The bedstead should be washed with soap and water, using a cloth, and any spots removed with sapolio. Afterward it should be gone over with some disinfecting solution; the disinfectant alone will not do, as most such solutions do not remove dirt well.

A private room should have a thorough housecleaning upon the departure of each patient. The walls should be brushed, fresh white curtains put up if needed; the blankets from the bed of a "dirty" case should be sent to the laundry, but for those from a clean case airing and sunning are usually sufficient. Nurses should remember that blankets are difficult to wash, and that the process destroys their beauty; they should therefore not be sent to the laundry unless it is absolutely necessary. (For very ill patients or in cases where the blankets are likely to become soiled, it is wiser to use old ones.) Mattress pads should be washed after each patient, unless the case has been a very short one. Pillows should be sunned and aired. Dresser drawers should be emptied and cleaned.

FUMIGATION

Preparation for Fumigation.—When a room is to be fumigated, the nurse is usually required to prepare it;

and she should know how the fumigation is done. Fumigation may be done after any case which has had fever, any surgical case where there was pus or where drainage was put in, or after a death. The modern tendency is, however, to omit fumigation and to depend upon air, sunshine, and mechanical cleansing.

In preparing a room for fumigation, the windows should be tightly closed and any ventilating registers or open fireplaces sealed with an air-tight cover or with paper pasted on. The drawers of dresser and washstand should be left open, the mattress turned crosswise of the bed or put over the head-piece, the pillows put so that the vapor may get at both sides of them, and the blankets or other bedding hung over chairs or on an impromptu line. The fumes of sulphur or formaldehyde are not very penetrating, and anything which is to be rendered germ-free must be fully exposed.

Fumigation.—*Sulphur* is not as much used as formerly, because it injures fabrics and some metals and its odor is very lasting. It usually comes in the form of candles, which are saturated with alcohol and lighted.

Formaldehyde gas, produced by the evaporation of formalin (a 40 per cent. solution of the gas) or by the heating of some solid form of it, is the substance most commonly used. There are various forms of apparatus for generating it, and a number of kinds of lamps and candles of the solid formalin; each has its own method of being handled.

The action is more rapid and thorough if the air in the room is moist. The air valve in a radiator may be opened to let out some steam, or large pans of water, hot and steaming, may be set in the room.

Most bacteriologists assert that the "sheet" method is quite as satisfactory as the generators, and in some cases to be preferred, since it lets loose a large body of the gas at one time, filling the room and penetrating every corner; whereas some of the generators are so long in

producing the requisite quantity of gas that it becomes ineffective. In using the "sheet" method, a large bedsheet is saturated with the proper amount of formaldehyde (a pint to 1000 cubic feet of space) and hung in the room on a line. One has hardly time to get outside before the fumes from it become very disagreeable.

Potassium permanganate crystals combined with liquid formaldehyde in the proportion of six ounces to a pint is one of the newer methods of fumigation, and is very effective. The crystals are placed in a water-tight vessel and the liquid poured over them. The vessel should be amply large, 14 or 16 quarts, as a vigorous chemical reaction takes place causing the mixture to boil over; it is safer to set the containers on newspapers, as the permanganate leaves bad stains. The objection to this method is that it is difficult to enter the room afterward on account of the stifling fumes.

As soon as the fumigation is started, the door of the room should be sealed with gummed paper or the cracks stuffed with cotton or strips of cloth. This is done chiefly to prevent a disagreeable odor in the building, but also because some of the vapor may escape.

Length of Fumigation.—It was formerly thought necessary for a room which was being fumigated to be kept closed twenty-four hours. Now, six hours is considered sufficient, as any germs would certainly be destroyed in that time if at all.

Airing after Fumigation.—When a room is opened after fumigation, plenty of fresh air should circulate through it in order to remove the odor. The smell of sulphur is very persistent and sometimes remains for days. The odor of formalin may be overcome by hanging in the room a towel wet with ammonia.

Cleaning Bath-rooms.—In cleaning a bath-room (it is understood that the maid attends to the floor), dust the woodwork; clean the faucets, washing them first with soap and water and afterward polishing them; if they are of nickel, the soap and water with some rubbing will

be sufficient; if of brass, some sort of a metal-polish must be used.

For the wash-basin, scrubbing with soap and hot water is usually sufficient, but it may be necessary to use a little kerosene or gasoline to remove the grease. Always use laundry soap for cleaning, as white toilet soap is not effective. It is well to let some of a hot solution of sal soda run down the waste-pipe every few days to dissolve grease, etc., which may have accumulated there. If the water does not run from the basin readily, report it, as it can be better remedied before it becomes entirely blocked.

The bowl of the closet, if well flushed after each using, should need little attention, but it is best to clean off each day what little soiling there may be. A stiff brush with a handle may be used for this purpose, but if the water supply is hard some scouring powder may need to be used upon a cloth. If a closet bowl is really dirty, soap and hot water should be used.

The bath-tub and sink should be cleaned with hot water and laundry soap or one of the cleaning powders which does not scratch. Enamel (the material of which these fixtures are usually made) is easily scratched and if cleaned with a gritty substance is much more difficult to clean the next time. If the tub is very dirty or seems greasy, kerosene or gasoline applied with a cloth will readily clean it; the tub may then be washed with hot water and laundry soap to remove any odor. Use hot sal soda solution in the waste-pipe from the tub as you did from the wash basin.

Care of Plumbing.—Nurses should know that if a waste-pipe becomes clogged, it is usually due to carelessness. Bits of soap with hairs caught on them are a common cause of trouble in pipes leading from sinks, tubs, and basins. The soil-pipe from a closet is larger, and will carry off any material which is readily soluble. Matches or pieces of newspaper are apt to be caught in the curves of the trap below these fixtures and make

trouble. Cloth or cotton will not go through and is invariably disastrous. An accident such as dropping a cake of soap into a closet, if it cannot be removed immediately by the hand, usually means that a plumber must be had to take up the entire fixture. A nurse is a responsible person, and none of these accidents ought ever to be due to her carelessness or negligence.

Cleaning of Utensils.—Bed-pans, urinals, and emesis basins should have a daily and a weekly cleaning in addition to the casual cleansing which is given each time they are used. The immediate cleansing should be as follows: unless the contents of the vessel are fluid, some cold water should be added before emptying. The utensils should then be rinsed with cold water (hot water coagulates the albumen contained in feces and vomitus) and if any particles adhere to its sides, they may be scrubbed off with a brush or whisk broom kept for the purpose. A second rinsing with hot water should then be given, as a sort of scalding.

Utensils which have been used in contagious cases are not safe unless disinfected or sterilized *every time* that they are used.

Daily Cleansing.—Once a day, at whatever hour is most convenient, all bed-pans, urinals, etc., should have a special cleaning given them. They should be scrubbed first with cold water, then with hot soda solution (a heaping teaspoonful to a quart), and then with a warm disinfecting solution. Some of the pine-tar compounds are usually used for this purpose. If the hospital has a sterilizing hopper, these utensils should be boiled in it each day.

Weekly or Bi-weekly Cleansing.—At least once or twice a week all utensils should be put into a boiler reserved for this purpose, covered entirely with water, and boiled for one-half hour.

Disinfecting Linen.—Bed and body linen from typhoids, tuberculous, specific, or other cases of communicable disease should be thoroughly disinfected before

being sent to the laundry, as there is a very real danger in handling infected linen. Typhoid linen in particular is better handled with gloves. As soon as it is removed from the bed or room it should be placed in a tub of solution and left for one or two hours, then wrung out and sent to the laundry. If it is to be washed within the day, there is no objection to leaving it wet, but if it is to be left over for a day or two, it must be dried to avoid mildewing.

Care should be taken not to crowd a tub with clothing which is to be disinfected; the pieces should be put in loosely, so that the solution may easily penetrate them.

Disinfecting solutions should not be made up by guessing, but both water and disinfectant should be measured.

Badly-soiled Linen.—If linen is soiled with fecal matter or thick discharge, this should be washed off before it is put to soak or sent to the laundry. It can easily be done by holding the soiled spot down into the bowl of the closet while it is being flushed, or under the faucet of a hopper. Babies' napkins may have their first cleansing done in this way without soiling the hands. Blood should be soaked out in cold water; if left in for an hour or more, it will not require rubbing to remove it. If blood-stained articles are put into warm or soapy water the stains become set and are almost impossible to remove.

Care of Hands in Cleaning.—In cleaning sinks and utensils, the nurse should be careful not to soil her hands. If the work cannot be rightly done without putting the hands into water, rubber gloves should be worn. Most discharges, particularly those from the bowels, swarm with bacteria; these are likely to infect any cut or scratch which may be upon the hands, and still more are likely to be carried to a patient.

The nurse should from her first day in the hospital learn to keep her hands out of infection. It is almost

impossible to get the hands clean enough to be safe when once they have become infected, and the only safe way is to avoid touching things which are not clean.

A second reason for keeping the hands out of water and solutions is that these tend to make the hands rough and so afford a lodging-place for bacteria. A nurse's hands should be soft and smooth, not only that they may be agreeable to the patients whom she handles, but because rough hands are a positive source of danger. Whenever the hands are washed, though it be many times a day, a good hand lotion should be used. The spaces under the finger nails also afford a harbor for germs, which are thus carried from one place to another and readily deposited upon whatever one may have occasion to handle. The nails should therefore be kept short and smooth and should be cleaned frequently with the point of a file or a hardwood stick, something which will not tear up the tissue and make it rough.

Economy in Disinfectants.—Nurses should bear in mind that most of the disinfectants used in hospitals are expensive, and should use them with a due regard for this fact. We cannot get along without these drugs, and weak solutions will not do the work, but we should use no more than is really needed. Bichloride, carbolic, lysol, and creolin are among the most expensive, and should not be used when something cheaper will do. Chloride of lime is not costly, but should not be used for linen, as it is likely to rot it or make holes in it; it should be perfectly fresh. Cresol and the various pine-tar compounds are not expensive, while sal soda is the cheapest of all. There is no one disinfectant which is suitable for all purposes, and this must, of course, be considered. Any article which can be boiled needs no other disinfection, unless like linen—it has to be handled much beforehand; boiling may not however be the cheapest method, as if one uses gas, it is possible to be extravagant.

Care of Refrigerators.—The care and cleaning of refrigerators and ice-chests are parts of the nurse's duties,

and the condition in which they are found is a good test of her thoroughness. Daily cleaning should be insisted upon. Everything should be removed from the food-chamber, any milk, butter, etc., which is left over from the previous day should be sent to the kitchen so that it may be utilized. The sides and bottom of the chamber should be washed first with hot water and soap, then with ammonia or soda solution if metal-lined. The ice should be lifted out and the ice-chamber cleaned, using soap if necessary. The drainage-pipe should be flushed each time with soda solution, and care should be taken that it does not become clogged.

METHOD OF CLEANING VARIOUS SUBSTANCES

Wood or linoleum floors, clear water.

Tile or marble floors, or terrazzo, soap and water.

Rugs, brush and beat in the open air.

Wood furniture, cloth barely damp, dustless duster, or cloth with small amount of linseed oil.

Enameled iron furniture, damp cloth or soap and water.

Brass or bronze furniture, dry cloth.

Brass or copper apparatus or faucets, any good metal polish.

Nickel, soap and water.

Aluminum, soap, bon ami or metal polish.

Rust on iron, rub with or soak in oil of almost any sort.

Marble, washing soda and hot water.

Rubber goods, warm (not hot) water and soap. Dry thoroughly. Do not fold.

TO REMOVE STAINS

Blood, soak in cold water. Peroxide.

Meat juice, soak in cold water.

Feces, soak in cold water, then wash with soap and hot water.

Tea, coffee and fruit juices, pour boiling water through stain or soak in hot water. Chlorinated soda.

Vaseline or grease, washing soda and hot water.
Alcohol. Gasoline.

Ink, oxalic acid, rinse well. Lemon juice and salt, expose to sun. Turpentine on colored materials.

Red ink, soap and water.

Iodine, alcohol. Ammonia.

Iron rust, lemon juice and salt. Oxalic acid.

Medicine, cold water or alcohol.

Mildew, lemon juice and sunlight, or lemon and salt, with dry starch afterward.

VENTILATION

Ventilation is required because (1) fresh air affords oxygen which is needed in the processes of repair and nutrition.

(2) Carbon dioxide, produced in breathing, in the burning of gas lights, etc., is poisonous, causing headache, langor, restlessness, etc.

(3) Foul, or used, air is difficult to heat.

Ventilating Systems.—Many modern hospitals have a fan or blower system of ventilation. The really good ones are very satisfactory, and change the air often enough to provide a proper amount. If one of these systems is in use, the nurse has very little to do with providing pure air for her patients, or in regulating the temperature of the room. She has rather to resist the temptation to think that only cold air is pure and that the window should be opened. With a ventilating system, an open window spoils the draft in a room and if the door is open into another room in that one as well. If a room or ward seems close or is too warm, the nurse should report the matter and not try to regulate it herself.

Ventilation by Windows and Doors.—In hospitals which have no ventilating system and in private houses, the nurse must know how to provide her patient with fresh air under conditions which are less than ideal.

If the room has but one door and one window, one may ventilate by the following methods:

Open the window at the top, drawing the shade down, letting the fresh air come from underneath it and from between the two sashes. If the bed is by this means in a draft, it may be moved.

Or, open the window at the bottom, and place a screen of some heavy material between it and the bed.

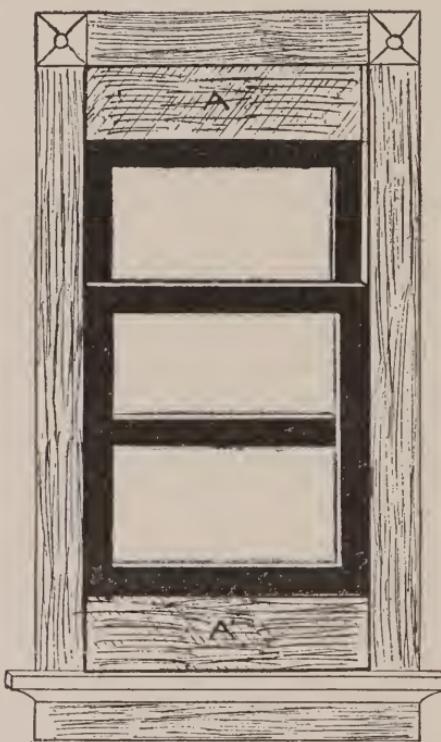


FIG. 2.—Window ventilation. *A, A'*, inserted boards.—(Paul.)

Or, open the window at the bottom and put a board, cut to the right length, under it, closing the window down to meet it, allowing the air to come in only between the two sashes.

The above arrangements are for continuous ventilation.

If the patient objects to them, or for any reason they cannot be used, try the following:

Cover the patient very warmly (or the face may be protected by an umbrella), throw open the window and the door as widely as possible, and allow the room to become filled with fresh air.

Or, open the adjoining room or corridor to the fresh air, keeping the patient's door closed. After a time, close this adjoining room, and open the door leading to the patient's room.

These last methods are not so good as the continuous, because they are apt to be done only a few times during twenty-four hours. The patient therefore gets only a "breath of fresh air" for a short time, when it is needed all the time.

Ward Ventilation.—Wards are more difficult to air properly than are private rooms, as the beds are usually near the windows and the patients are in a draft when they are opened. Having the windows open at the top with the shades half-way down, or using the boards at the bottom seem to be as satisfactory as any way. Some sort of continuous ventilation is quite essential for a ward, as with a number of people in one room, the occasional or intermittent methods are inadequate.

The present-day tendency toward open-air treatment for various diseases is having a marked effect in making people less fearful of cold air, "night air," etc. It grows easier every year to insist upon proper ventilation.

If a nurse has difficulty in inducing a patient to permit her room to be properly ventilated, an appeal to the doctor and a word from him will usually adjust the matter. It is wise to have the physician say at what temperature the room shall be kept if there is any discussion about the matter.

REVIEW QUESTIONS

Why is cleanliness of special importance in the hospital?
Of what is hospital dust composed?

What is surgical cleanliness? How may it be secured?

How should sweeping be done?

How should rugs be cleaned?

How is dusting properly done? Give details.

Give points on putting a room in order.

What care should be given plants and flowers belonging to patients?

Give the details of cleaning after the departure of a patient.

How do you prepare a room to be fumigated? How soon may a room be opened after fumigation?

Give in detail the cleaning of a bath-room, wash-basin, sink, closet, tub, etc.

Give points on the care of plumbing.

Tell how to clean utensils.

How may bed linen be disinfected?

What should be done with badly-soiled linen?

Discuss disinfectants and tell for what each is best used.

What care should a nurse take of her hands? Why?

How should a refrigerator be cleaned? How often?

Give methods of cleaning various substances.

Tell how to remove stains of various sorts.

Why is ventilation necessary?

Give methods of ventilating a room having one door and one window.

Give points on the ventilation of wards.

What are the nurse's duties when the building has a fan ventilating system?

CHAPTER III

BEDS. BED-MAKING

“We believe that the hospital is the best possible place to learn our profession in; but we must remember that it is not chiefly a training school for nurses. It is a place where the sick are received for treatment.”

Demonstrations.—Bed-making, with and without patient. Preparation of surgical bed. Delivery bed. Placing back rest. Use of bed cradle.

Kind of Bed.—It is pretty generally understood that the best bedstead is an iron one. Wooden beds are cumbersome, hard to keep clean, and afford lodging for vermin. Brass beds are handsome, but expensive.

Size of Bed.—A bedstead should be $6\frac{1}{2}$ feet long, 3 or $3\frac{1}{2}$ feet wide, and 30 inches from the floor to the top of the mattress.

Casters.—The bed casters should be of rubber, as wood or metal ones mar the floors. Large casters move more readily than small ones, but a bed should not roll too easily, as it interferes with the handling of patients. The sliding shoes are preferred by some instead of casters, as they are durable, move readily, and do not cut into the floor.

If a bed caster breaks, it should be at once reported, or the floor may be irreparably damaged.

Foot Piece.—The foot piece of the bed should be low, barely above the top of the mattress. Higher ones than this interfere with the handling of the patient and with bed-making, and have nothing but looks to recommend them.

Springs.—The bed springs should be the National pattern or of double woven wire, the best obtainable,

with an arrangement at one end for tightening. Coiled springs are soft and uneven and hard to keep clean.

High Beds.—A high bed is always to be preferred to a low one. There are often drafts near the floor which do not occur higher up. The impure air usually sinks, and the foulest air in the room may be near the floor. Low beds tire a nurse and prevent the proper handling of patients; while one may work all day over a high bed without getting backache or having the muscles become much fatigued. If the top of the mattress is about the height of an ordinary table (30 inches), the nurse can get a proper leverage for lifting or turning a patient; she can handle him far better than when the bed is either higher or lower.

If the patient gets in and out of a high bed often, a stool must be used.

Vermin in Beds.—Despite the most careful watching, one will find occasional vermin in beds; they are usually brought in upon the patient's clothing. Tiny black spots or small blood spots on the bedding are suspicious circumstances, or the vermin may be detected by their characteristic odor; unfortunately the first knowledge of their presence is apt to come from the patient being bitten by them. They are usually found in the cracks and joints of the bedstead and along the edge of the mattress.

Pure carbolic acid, 1-500 bichloride solution, or gasoline put into the cracks will kill vermin. The liquid must be gotten into every corner or it will be quite ineffective. Care must be taken in applying these remedies, as spots of them gotten on the floor is nearly certain to spoil it. Protect the floor with plenty of newspapers, or better still take the bed out of doors. Boiling water will kill the vermin, but does not usually destroy the nits. Some of the large public institutions use a plumber's torch, directing the flame into every crack and crevice; this is an effective mode of treatment, but discolors the bed somewhat.

Mattresses.—Mattresses should be of a durable material, something which will not mat or become lumpy, and which will not soon wear into a hollow at the center. Hair or a good cotton felt is preferred.

Mattresses should be alike on both sides, so that they may be turned frequently. The turn should be made part of the time from side to side and part of the time from head to foot, so as to make the wear come evenly.

It should be unnecessary to say that a mattress ought to fit the bed. It is very annoying to a patient to have a mattress which constantly slips down because it is too short.

Pillows.—Pillows should be of medium size, moderately well filled. A pillow which is too large or too soft is often a source of annoyance. A certain number of hair pillows should be available, when a firm support is desired or when the patient prefers a hard pillow. One needs also a supply of small pillows, as a small amount of support or padding is often needed, and nothing else answers as well. With very stout people, a tiny pillow at the small of the back gives relief when nothing else will. When a person lies on his side, a thin pillow between the knees or one supporting the abdomen adds greatly to his comfort. Knee rolls, filled with hair, are more manageable than pillows and afford a firm support for the knees of a patient who must lie upon his back.

Care of Mattresses and Pillows.—Too much emphasis cannot be placed upon the proper care of mattresses and pillows. Both are easily ruined, and are almost impossible to repair except at considerable expense. All beds should be made up with a rubber sheet across the middle, and even for a convalescent patient, the bed should be protected as long as baths, enemata, or douches are being given. For very dirty cases, or those where there is much drainage, it is wisest to protect the bed by a mackintosh large enough to go over the whole.

If a patient complains that the rubber is hot or uncomfortable, it may be put under the lower sheet or even

under the mattress pad, or a double draw sheet may be used over it instead of a single one.

Rubber sheeting should be double coated, as a spot is very hard to remove from a cloth backing.

Before you put a mackintosh on a bed, hold it to the light to see if it is perfect. A small crack or a few pin-holes will allow fluids to run through.

Rubber sheeting should never be folded when it is put away, but should be rolled on a broom-stick or roller.

Protecting Pillows.—Rubber pillow slips should be provided, and should be used whenever there is a possibility of a pillow becoming soiled. *Never put a pillow in the vicinity of a wound or drainage unless it is protected by a rubber cover.* This rule should be strictly enforced. Accidents constantly occur because a nurse forgets and places an unprotected pillow near a rectal or bladder drainage, under the knees of an obstetric case, near a fresh wound which has been drained, or under the head of a patient having a wound of the skull or face.

Pillows used for ordinary purposes should have covers made like the slips and of the same material but with tapes to tie them on. These are not changed as often as the outer covers, but go a long way toward making a person feel that he is not using an article which has been in almost direct contact with all sorts of patients.

Bedding.—Mattress pads should be quilted rather than tied, as the quilted ones are smoother and launder better.

Sheets and pillow slips should be of cotton. Linen rumples easily, becoming untidy in a short time, while many persons object to it on the ground that it feels cold and clammy.

Sheets should be large enough to tuck well under the mattress on all sides. Pillow slips should be too large rather than too small.

Blankets are the preferred covering for sick people, as they are both light and warm. Those of part wool are better than of all wool, as they launder more satisfactorily. Quilts and comfortables are hard to launder and

are apt to feel heavy; they are less warm in proportion to their weight. New cotton blankets make good bed-coverings, but after they have been washed a number of times they no longer seem warm.

Spreads should be as light as possible. Marseilles or any heavy material is very uncomfortable for the patient. A dimity or some of the "featherweight" kinds are best. If you cannot obtain a light weight spread, use a clean sheet.

BED-MAKING

Principles.—Important points in bed-making for the sick are: first, that the bed shall be comfortable; and second, that it shall be made so that it will stay comfortable.

What is under a patient is far more important than what is over him.

A bed will not stay made unless it is *tight*, nor will it be comfortable unless it is absolutely *smooth*.

Making the Empty Bed.—Spread the mattress protector on smoothly. This should fit the mattress exactly and should not come over the edge on either side.

Spread over this a large sheet, its right side uppermost. Stretch it and tuck in smoothly all around, making it as neat underneath as it is above. The corners should be folded with the "box" effect. If the sheet is too small to go under the mattress far enough to be secure, it may be pinned with a large safety pin put through into the mattress on the under side (never at the side, as it is likely to tear out). If the lower sheet is large enough to tuck in for a foot at the sides, so that it will not become disarranged when the patient turns or moves about, the pins will be unnecessary.

Put on next the rubber sheet, across the middle of the bed, its upper edge coming just under the edge of a pillow laid flat. The draw sheet, either single or double, should be laid over this, tucked smoothly for at least a foot under one side, pulled tightly and tucked snugly

under the other side. The draw sheet must be put on straight or it will wrinkle. Pins may be used in this also if needed, but the precaution should be taken to put them underneath and to pin into the mattress.

Put the top sheet with the right side down, the wide hem at the top, the top of the sheet coming just to the head of the bed. It should be long enough to tuck in well at the foot, so that it will not become loosened and expose the patient's feet. Some hospitals put a loose fold in this sheet at the bottom, to give freedom to the patient's feet.

Over this spread the blankets, two thicknesses for winter and one for summer, each pulled very smoothly and snugly. The top edge of the blanket should come about a foot from the top of the bed (where the patient's chin would naturally be) and the sheet should be folded down over it. The top sheet and the blankets are tucked in together, making the box corners at the bottom, and getting them very smooth underneath. (A bed which is not made smoothly on its under side looks untidy and is uncomfortable in a vague sort of way. One carefully made, looks and feels as it should.)

The spread should come within 6 inches of the top of the bed, be tucked in only at the foot, and the sides allowed to hang. The lower corner should be folded in and finished so that it hangs with a slant (the "hospital corner").

The corners of the pillows should be well into the corners of the cases. They are to be pressed flat and smooth with the hands. If two are used, one should be laid flat (the front being the side which has no seam), the other standing straight and square against the head of the bed (the seamless edge of the case up). This second pillow must be very carefully placed or it will tip forward and sideways. The open end of the pillow case should be away from the door of the room or ward.

Fracture Beds.—A fracture bed may be arranged by putting boards under the mattress, either lengthwise or

crosswise, so as to render the bed firm. These are not used except in fractures of the hip or lower limbs, but are absolutely necessary in those cases. There are many sorts of mechanical devices for lifting and moving patients with fractures. The nurse should familiarize herself with the working of whatever apparatus the hospital owns.

Surgical Beds.—There are different ways of preparing a bed for a fresh operative case, but the chief points are the same in each.

The whole bed is to be warmed.

The patient is to be put between blankets.

The bed is to be easy to put the patient into.

The bed is to be ready for use at an instant's notice.

The bed is made as usual, except that two blankets are added, one to go over the patient and one underneath him. (In some hospitals, the spread is removed and a sheet substituted.) The pillows should be laid aside, and in their place a small rubber sheet covered by a towel is pinned smoothly with four safety pins.

The top bedding may be folded back over the foot piece.

Or, it may be folded down from the top about a foot, up from the bottom the same amount, and over from the side in a neat roll.

Or, the bed may be left closed, but loosened at the sides so that the covers may be thrown back quickly.

Three or more hot water bags or cans, filled very full and very hot, are to be placed in the bed. One should be about where the patient's shoulders will come, one at the hips and the third at the feet.

On the bedside table, there should be placed two emesis basins (the kidney-shaped ones with a high back are best), one or two towels, paper and pencil for recording pulse, and some small squares of gauze for wiping the patient's mouth. The proper preparation of the bedside table is important. The bedside table and chair

should be moved well back until after the patient is put into bed.

The hot water bottles should be removed just before the patient is put into the bed, and they should not be put back unless by order of the physician. It should be made a rule that *a hot water bottle is not to be left in bed with an unconscious patient without an order*. No matter how careful a nurse may be, an accidental burn may occur, and the risk is too great a one to take.

If the physician orders hot water bottles put near a fresh operative patient, they may be placed just beneath the spread outside the other bedding; it will take the heat but a few minutes longer to penetrate, and there will be practically no danger of burning.

Some modern operating-rooms have blanket-warmers, ovens which thoroughly heat the blankets in which the patient is to be wrapped. These blankets are left on after the patient is placed in bed, and are not removed until he has thoroughly reacted.

Delivery Bed.—If an obstetric patient is to be delivered in her own room, the bed is prepared as follows:

The mattress pad, lower sheet, mackintosh, and draw sheet are put on as usual. Over the whole is spread a large mackintosh (one kept for the purpose or used only for clean cases) of a size sufficient to cover the entire bed and come well over the edge; a large cotton sheet is put over this and tucked firmly under on all sides. This arrangement makes it possible for the patient to move about as much as she pleases without loosening the sheets or having them become wrinkled.

For the delivery, a sterile sheet is placed over this, a sterile quilted pad, or whatever the hospital is accustomed to use. After the delivery, the patient may be turned on her side, and the large sheet and mackintosh removed together with all discharges. The patient is then rolled back on a fresh, clean bed.

Bed for Fowler Position.—The Fowler position is much used, especially for drainage cases. The patient is in a

sitting posture; special beds have been devised which support him in this position. Some of these go over the ordinary bed, some are in the style of a "chair bed," and in some instances the doctor will use a hammock chair. Lacking a special device, the whole bed may be tilted to an angle of 15 or 20 degrees, or a back rest used and a firm pillow or padded board fastened under the patient's buttocks to keep him from slipping down in bed.

Back Rests.—Back rests (or bed rests) may be of woven wire with iron frame, or canvas with wood frame. The latter are lighter to handle, but are less durable and not so easy to keep clean. A very satisfactory arrangement is to have the back rest attached to the frame of the bed, coming under the mattress, so that the whole may be lifted to the desired angle.

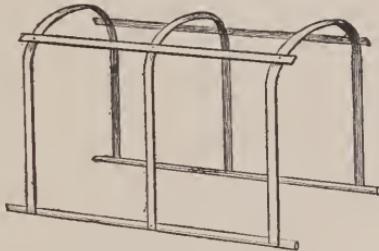


FIG. 3.—Cradle for protecting patient from pressure of bed-clothes.—(Stoney.)

Bed Cradles.—Bed cradles are made of wood or iron. They are frames designed to hold the bedding away from any portion of the body that might be made uncomfortable by its weight. They are made in different sizes, some large enough to go over the body or both legs, some small enough for a hand or foot.

Knee pillows, heel cushions, circular or square air-cushions, lifting cranes, rubber protective pads, air beds, water beds, etc., are better illustrated than described, and their use is best taught by actual practice.

To Air the Bed of a Patient Who is up.—Open the window if possible. Remove and fold the spread.

Loosen bedding at edges. Remove bed clothing one piece at a time, handling by center and folding roughly (one length-wise and one cross fold). Spread pieces over the back of a chair. Turn mattress, preferably from head to foot. Leave for a short time if possible, then remake bed.

Changing Bed with the Patient in It.—All bedding should be aired and warmed before beginning the work.

Draw Sheet.—Loosen both edges of the sheet, turn the patient on his side, roll the soiled sheet up as tightly



FIG. 4.—Changing a draw sheet.—(*Aikens' "Home Nurse's Handbook of Practical Nursing."*)

as possible against his back (taking care that any wet or badly soiled portion is inside the roll), lay the fresh sheet lightly over the bed so as to get it in the center, and tuck it in smoothly and snugly at the side nearest you. Roll the rest of the fresh sheet tightly against the soiled sheet, push it down firmly, turn the patient to his other side right over the two rolls of sheet, remove the

soiled sheet, pull the fresh one smooth and tuck it in. The patient may drop on his back again as soon as the sheet is partly adjusted. To be sure that the draw sheet is smooth under a patient's back, pull it gently until you can see it pull on the other side of the patient; if this is not done, it may look all right, but especially with a heavy patient there may be several unsuspected wrinkles in the middle of his back.



FIG. 5.—Changing the under sheet, medical method.—(*From Sanders' "Modern Methods in Nursing."*)

If the patient is not allowed to turn, as in fracture of the hip or thigh, it is more difficult to change the draw sheet, but it may be done with a little practice. It takes two nurses to do it properly, one to lift the patient a trifle, the other to adjust the sheet. With a very heavy patient, it may be necessary to remove the soiled sheet first and afterward adjust the clean one.

Lower Sheet.—The changing of the lower sheet is managed in exactly the same manner as the changing of the draw sheet, but is a little more trouble to do dextrously.

With practice, the lower sheet and draw sheet may be changed at the same time, so as to obviate the necessity of turning the patient more than once.

Top Sheet.—To change the top sheet without exposing the patient, loosen the covers all around, remove all but the sheet and one blanket, spread the fresh sheet smoothly over the top of these and an extra blanket over this; then, holding the two outside covers firmly with one hand (the patient may do this for you if he is not too ill), pull the inside covers (the soiled sheet and blanket) from underneath and off the bed.

Or, the fresh sheet may be placed across the patient's chest, folded back and forth in crosswise folds; then slipping the hand under the covers, the clean sheet may be pulled down to the foot and the soiled one removed at the same time. Or the changing may be accomplished by starting at the side instead of the top. All of these methods take considerable practice if they are to be done skillfully.

Changing Pillows.—Pillows may be removed and aired while the bed-making is going on, if the patient does not object. To change a pillow, place the fresh one at the head of the bed where it can be easily gotten at, slip your hand down under the patient's back between the shoulder-blades, so that the back of the neck and the head rest upon your arm, lift the patient gently, slip the pillow out with your other hand, lay it aside, and slip the fresh one in. Care should be taken not to let the head of an unconscious patient fall forward so as to obstruct his breathing.

Usually, the pillow should go just under the edge of the patient's shoulders. If two pillows are used, the second one should be placed only under the head. Patients have many peculiarities in regard to the arrangement of pillows, and what is comfortable for one is not necessarily so for another. If a patient looks comfortable he is apt to be so, and *vice versa*.

The mattress may be changed without removing the

patient, but it is usually less trouble and more comfortable for the patient to lift him to a cot or stretcher for such a procedure. Except in certain fracture cases, the mattress should be turned or changed at least once a week.

Bedside Table.—Patients are many times annoyed and made uncomfortable by the inconvenient placing of the bedside table. Nurses commonly put the table on a



FIG. 6.—Changing pillow.—(*Aikens' "Home Nurse's Handbook of Practical Nursing."*)

line with the head of the bed, a position which compels the patient to reach backward if he wishes to get anything from it. The table should be placed about the middle of the bed just opposite the patient's hand. This may not look as well, and may not be as convenient for the nurse, but it is far more so for the patient.

REVIEW QUESTIONS

Why are iron beds the best? Describe a proper hospital bed.
How can vermin in beds be gotten rid of?

What sort of mattresses and pillows should be used? What re should be given them? How are they best protected?

What are the best sort of sheets? Of bed covers? Of spreads? What are the points to be observed in bed-making?

Tell in detail how to make an empty bed. A surgical bed. A fracture bed. A delivery bed.

How can you, with an ordinary bed, make a patient comfortable in the Fowler position?

For what are bed cradles used?

Tell how to air the bed of a patient who is up.

Give in detail the changing of a bed which is occupied.

CHAPTER IV

SERVING MEALS. FEEDING. SPECIAL DIETS

“Nothing is too much trouble where your patient’s welfare is concerned.”

Demonstrations.—Setting tray. Serving food. Feeding helpless patient.

Among the first services which a young nurse is allowed to render a patient is that of carrying a meal to him. This seems a simple matter, but involves many things which make it nothing less than a fine art.

No one thing is the occasion of more criticism from patients than badly served meals. On the other hand, nothing seems to give more pleasure or be productive of more praise than an attractive tray.

Preparing the Patient for his Meal.—Before you go to the serving kitchen for a meal, see that the patient is ready for it. His hands should be sponged (unless a bath has been recently given), and if he is able to feed himself he should be propped into a position so that he can do it easily. One who is able to sit up in bed needs back rest and pillows. See that there is no draft from the window which might cool the food, and that the patient has sufficient covering over his shoulders. The eating table, of whatever sort, should be set in place and adjusted to the proper height. If the eating table is at the side of the bed, it must be the left side, so that things can be reached with the right hand; this point needs emphasis, as the mistake is commonly made of putting it on the right.

Taking the Tray to the Patient.—In carrying a tray, do not hold it with both hands. Learn to carry it as waitresses do, supported by the outspread fingers of one

hand, steadying it against the shoulder. In this way, the other hand is free for the opening of doors or for the care of your skirts if you must go up or down stairs. When you arrive at the patient's room, set the tray in its proper position on the eating table, being sure that the front of the tray is at the front of the table. If the table needs readjusting or the patient's position is not comfortable, attend to it now. The napkin should be placed, the bell put where it can be reached, the first



FIG. 7.—For the patient on light diet.—(*Aikens' "Primary Studies for Nurses."*)

dish uncovered; if there is meat, ask whether you shall cut it up. Look the tray over, to be sure that nothing is missing. Meantime the patient has had opportunity to decide whether or not the meal is appetizing. If any dish is distasteful, remove it from the tray and carry it back with you. If any changes are to be made, find them out at this time, and see to them before you serve another patient.

Kinds of Diet.—The diets usually ordered are called liquid, soft, light, and full. Sometimes soft and light diets are construed to mean the same thing; sometimes light diet is the same as full diet, but without meat.

Liquid diet is what the name implies, but may also

include ice-cream, junket, or by permission thin wafers to be eaten with broth.

Soft diet refers to cereals, soft toast, soft-cooked eggs, custards, some of the simpler desserts, etc. All liquids are allowed with soft diet, and crackers; oranges, baked apples, or apple sauce may be included, only by order.

Full diet ordinarily means meat once a day and any articles of food which may with propriety be served to a person whose digestion is sluggish and who is not taking exercise.

When a doctor says that "the patient may have anything he wishes" in his diet, he is not to be taken literally. He means simply anything included in the hospital dietary or anything which is considered proper food for one in his condition. Doctors will occasionally permit a patient to have articles which are classed as unwholesome, as doughnuts, hot cakes, pickles, etc., but such things should never be given without a definite order.

Serving Liquid Diet.—A patient who is allowed only liquids usually gets nourishment every two hours during the day and every three or four hours during the night if he is awake. This makes a glass of milk or a cup of broth as important as a full meal, and the nurse should see that it is carefully served.

Always, even on night duty, carry nourishment on a small tray covered with a napkin or doily. If there is a tumbler, have a small plate under it, not a saucer. Do not forget spoon or drinking tube. With broth or hot liquids which are served in a cup, take salt or sugar as the case may be. Add a wafer if it is permitted.

Patients who take liquid diet only often require to be fed. Using a bent glass tube is a favorite way, as the patient need not lift the head. (A drinking tube should be washed immediately after use or it is very difficult to get clean.) A feeding cup is a convenience, if the patient fancies it. He may drink directly from a glass or cup if it is but half full, the nurse meanwhile, supporting his head with her hand.

Remember that patients who are very ill or who lack appetite will often take liquid nourishment, something which they may drink, when solid food seems impossible to them. Likewise, delirious or unconscious patients will swallow fluids which are put into their mouths when they cannot be induced to masticate anything.

If a patient wishes to take the liquid nourishment himself, set the tray on the bedside table where he can



FIG. 8.—Feeding a patient.

get at it by simply turning his hand. Be sure that a clean spoon or tube is beside it.

A patient who is on soft or full diet may or may not be able to feed himself. If he cannot sit up, the pillow should be placed so that it supports the head firmly but does not bend the neck into an uncomfortable position. The napkin should be spread smoothly under the chin. The nurse, if she is to help, may sit or stand by the bedside, season the food, cut it up if necessary, and give it to him with fork or spoon in small mouth-

fuls. The most common faults in feeding are hurrying the patient, and forgetting that he may wish a drink with his food. Above all, be neat; a too-full spoon or one which drips is inexcusable.

A patient may prefer to feed himself, even though he is not allowed to be propped up. In this case, the eating table may be put just over the edge of the bed, not across it; it should always be at the left side; if the



FIG. 9.—Bed patient eating.

patient cannot turn, he may set the dish or plate of food on his chest and feed himself from it with more or less ease. It is usually more comfortable, however, for the dishes to remain on the tray if it can be correctly placed.

Preparing Trays.—There are many things about preparing a tray which seem small, but which are none the less important if the meal is to be a success. Never forget that *hot dishes are to be served hot and cold dishes cold*. Not only are they to leave the serving kitchen in proper condition, but they are to reach the patient

in the same state and be so arranged that they will remain palatable until they are eaten. A dish may be hot when it leaves the kitchen, but if it be carried uncovered for a long distance through a drafty hall or set by an open window until a pillow or back rest is adjusted, it will hardly be relished.

All dishes which are to be used for hot food must be warmed beforehand. The plates, plate-covers, vegetable dishes, soup bowls, etc., should be put into the warming oven at least ten minutes before they are to be used. If no oven is at hand, or if the china is fragile, it may be placed in a pan of very hot water. Tea and coffee pots should always be scalded before using and may be left with the hot water in them until needed.

The dishes for cold desserts, tumblers, bread-and-butter plates, butter chips, cream pitchers, and plates or dishes on which fruit or salad is to be served should be put in a cool place before being used. In summer, butter should always have ice served with it so that it will remain hard and appetizing till the end of the meal. Water should be cold, just as soup, tea, or coffee should be hot. Ice water should not be given even in hot weather, unless the physician approves.

Setting Trays.—Trays should be "set up" with knife, fork, spoons, cup and saucer, sugar, salt and pepper. In putting the food on, the cold dishes come first; for example, on a dinner tray, the dessert (if a cold one), bread, cream, water and butter are put on, then the hot dishes, the vegetable, meat and potato on covered plates, the soup in a bowl, and the tea or coffee. The tray is then carried quickly to the one for whom it is intended.

Arrangement of Tray.—The tray may be arranged as follows: The plate with the fork at its left and the knife and spoons at its right should be at the front in the center. Directly back of the plate should be the salt and pepper, with the tumbler of water a little to the left. Back of them is the cream and sugar. To the right

of the plate is the cup and saucer, behind it the tea or coffee pot. Behind this and a little to the left, is the dessert. At the left of the plate is set the soup bowl, behind it the bread-and-butter plate, and back of this and a little to the right, the vegetable. (The vegetable and tumbler of water may exchange places if desired.) If the tray is an oval or round one, the arrangement will have to be altered somewhat.

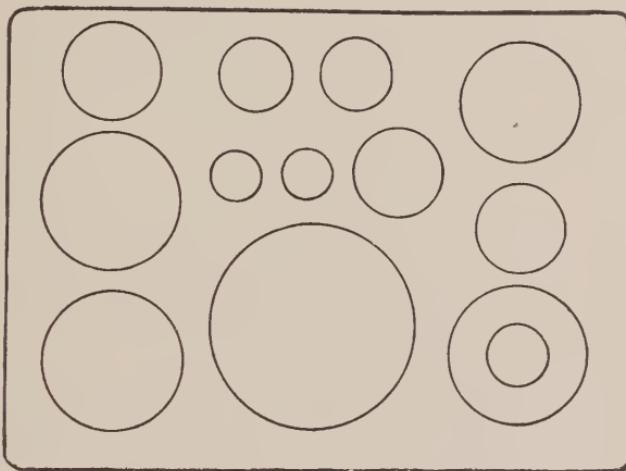


FIG. 10.—Diagram showing arrangement of dinner tray.

Amount of Food.—The amount served should not be too great. Far better have the patient ask for a second helping, than to destroy his appetite at the beginning of a meal by the sight of an overloaded tray. On the other hand, there should be enough served so that there be no suggestion of parsimony on the part of the institution.

Here again the responsibility rests upon the individual nurse. She is the one to see that the patient is pleased, and that the interest of the hospital is held in mind. It is she who must draw the line between extravagance and stinginess. She must remember that

she and her patients are only a few of many, and that if she is extravagant in the use of supplies even to but a small amount a day, the sum total is considerable at the end of a month, or of a year.

Neatness in Serving.—When meat or potato is put upon the plate, it should be placed in the exact spot where it is to remain; if moved the least bit, the result is a smear which spoils the appearance. A poached egg should be so placed that it will arrive whole, not broken. Soup should be served in bowls, not in plates, as it is practically impossible to carry a tray without slopping it from a dish which is at all flat. For the same reason vegetables or fruit should not have too much liquid in the dish. The tumbler of water should not be filled too full, and the tea, coffee, or cocoa should be sent in a pot not in a cup. Toast, if not buttered, may be folded in a small napkin to keep it hot; if buttered, it should be covered with a hot dish. Plate covers, by the way, are an absolute necessity in hospitals; a saucer or bowl can be used, but looks badly, and having no handle is hard to remove.

If there is abundance of linen, a clean, large table napkin may be spread over the tray and contents during transit from kitchen to patient; each corner may be pinned to the napkin underneath.

Patients without Appetite.—When the patient lacks appetite and does not want food, it is the business of the nurse to see that he takes a reasonable amount. If he is simply served with a tray and left to himself, he is quite likely to take only a few mouthfuls. If, however, a nurse comes in with a small, attractive tray, sits down beside the bed, cuts up the food, pours the tea or coffee, and feeds him, meantime chatting of things outside the sick-room, he will in most instances eat a goodly amount of the food which he would otherwise not have touched.

Getting Children to Eat.—With children, the nurse may get food taken by making a play of it. Food may

be served in a cup or bowl which has a picture at the bottom, and the child be induced to eat down to the picture. A house may be built of strips of bread or toast, to be torn down and eaten a strip at a time. Caves or mounds may be made of cereal or potato. Soup may be taken by means of a straw when it would not be relished from a spoon. A little ingenuity will find many such devices. Grown persons are not above being tempted by similar methods. Patients will often eat a small, definite amount when a larger quantity would discourage them.

Noting Amount Eaten.—For obvious reasons, trays should not be carried to a patient by a maid or porter, but by a nurse. If for any reason it seems necessary for this to be done by a servant, the nurse should be in the room to receive the tray when it arrives, see that it is properly placed, and that the meal is to the patient's liking. The nurse should be also the one to remove the tray, as this is her opportunity to see whether or not the meal has been eaten. If the tray is returned to the kitchen by a maid, it is possible for a patient to go for days with very little food before the fact is discovered.

All these things take time, but are quite as important as anything else which can be done for a patient. It is as much a nurse's duty to see that her patients are properly nourished as to give medicines on time or to administer baths or treatments.

Special Dishes.—Nurses should remember that it is almost impossible to plan a meal which shall please everybody. It is equally impossible for a hospital to serve from a bill of fare as hotels and restaurants do. It therefore depends largely upon the individual nurse to see that her patients have not only enough food of a proper sort, but that it is appetizing and pleasing to them.

If the hospital has a diet kitchen, it is very easy to ask for some special article or some new and dainty

dish; but even with all conveniences at hand, the nurse must study each patient's tastes and peculiarities. In any event, some one must use brains, for in no department is routine more deadly than in diet.

What to do.—Suppose, for example, that you have brought to the patient a meal which seemed to you a very nice one and which has been prepared and served with great care. There may be soup, roast mutton, green peas, and a dainty dessert. The patient looks the tray over and informs you that he "never eats" practically every article on it. What is to be done? Many different things are done, but the one right thing is to find out then and there what the patient does want which can be provided upon short notice. Often a simpler meal than the one prepared will be quite as satisfactory. Perhaps plain broth (always available), clam or oyster broth, or beef extract will do as well as soup. There may be a piece of steak to be had which will take the place of the roast, and can be broiled in a few minutes. Celery or lettuce may be available, or a can of tomatoes or string beans may be opened and a portion warmed quickly. A plain custard or junket which is almost sure to be on hand, may be preferred to the more elaborate dessert; or even an orange or a dish of fruit may be acceptable.

If a breakfast tray does not please, try offering cocoa in place of coffee, a bit of bacon, an egg cooked in a different style, a dry cereal instead of a cooked one (or *vice versa*), a dish of milk toast or dipped toast in place of the dry, etc.

Again we must take time and trouble, but time may be better spent in cooking than in soothing wounded feelings, and brains cannot be better used than in making a patient comfortable and happy. Try to think how it would seem to you to be served with a meal of which one dish was positively distasteful and another one for which you did not care, leaving but one article which you liked for the entire meal.

In nearly all hospitals the serving of food occasions far more criticism than any other one thing, and any institution which succeeds in doing it well is sure to be considered high class. Success in it depends almost entirely upon the individual nurse, and she may, by her care or carelessness, help to make or unmake the reputation of her hospital.

Special Diets.—When a special diet is ordered, the physician should be asked to state exactly what it includes and particularly what it excludes. No nurse should put herself into a position to be criticised for mistakes in a patient's diet. She should not even be required to use her judgment, but should have specific directions given her.

More attention is being paid to matters of diet than ever before, and quite frequently a nurse is called upon to provide her patient with food of a special type. In nephritis cases, for example, albuminous foods are forbidden; this leaves out of the dietary milk, eggs, meat, etc., and necessitates finding substitutes for them. In diabetes, starches and sugars are forbidden, presenting another set of problems. Again, a low-protein diet will be ordered, or a high-protein diet; or a vegetarian, a fat-free, or a salt-free diet.

The nurse must, in these instances, get directions from the doctor, so as to know exactly what she may and may not give, and she will be likely to need suggestions as to variety. She should not feel that these things are a trouble, but should the rather delight in her chance to get training along a special line which may afterward be of great value to her.

In some cases, as in typhoid or other intestinal disorders, or after some operations, it is important to give food which contains a minimum of waste material. In cases of constipation, coarse food with an excess of waste material is needed.

It is an excellent plan to hang in the diet kitchen a list of suggestions for each sort of diet, adding to it from

time to time any dishes which may have been found acceptable to a number of patients.

Liquid Diet List.—The following list includes only articles which may be considered as representing a definite amount of nourishment. Many others might be added which are more or less of the nature of drinks.

Albumen water	Oyster or clam broth
Meat broths	Strained soups
Milk	Buttermilk
Cocoa or chocolate	Egg lemonade
Malted milk	Koumyss
Gruels, oatmeal, etc.	Beef juice
Grape juice	Egg nog
Ice cream	Sherbet

Soft Diet List.

Anything included in liquid diet.
Soft-boiled or poached eggs.
Milk toast or dipped toast of any sort.
Cereals, cooked or dry, except oatmeal.
Custards, baked or boiled.
Gelatine preparations.
Junket.
Oysters, raw, if perfectly fresh.
Crackers.
Stewed prunes.
Cooked apples.
Oranges or grape fruit.
Simple puddings without raisins, rice, sago, tapioca, bread, corn-starch, etc.

Full Diet List.

Anything included in soft or liquid diet.
Meat but once a day, never pork or veal.
Bacon (the one exception to the above).
Chicken or game.
Eggs cooked in any manner except fried.
Fish, if fresh, preferably boiled.
Potatoes, not more than twice a day.
Any cereal.
Custard, lemon, or pumpkin pie, omitting the crust.

Rabbit	Frog legs
Sweetbreads	Brains
Sardines	Plain puddings
Plain cake	Gingerbread
Lettuce	Tomatoes, raw or cooked
Asparagus	Spinach
Green peas	String beans
Sweet potatoes	Celery
Lima beans	Water cress
Cauliflower	Carrots
Onions	Dates
Canteloupe	Watermelon
Grapes	Figs
Pineapple	Peaches
Cherries	Apricots
Pears	

Articles Forbidden.—A list of things forbidden is also a convenience. It will vary, of course, with different doctors, and in different hospitals. The kind of case also makes some difference.

Meat more than once a day	Cabbage
Pork in any form except bacon	Radishes
Veal	Turnips
Fried food of any sort	Beets
Baked beans	Cucumbers
Corn bread	Parsnips
Hot bread	Bananas, unless cooked
Hot cakes	Berries
Liver	Plums
Corn	

REVIEW QUESTIONS

How do you get a patient ready for a meal?

What is the easiest way to carry a tray?

Tell in detail how to serve a patient with a tray.

How do you prepare and serve a cup of broth?

Give points on feeding patients.

Give points on setting and preparing a tray.

Give points on neatness and best arrangement for a tray.

How may you get a patient to eat when his appetite is poor?

Why should a nurse, rather than a maid, carry trays to patients?

Give points on what to do if a patient is not pleased with the meal served.

Name twelve articles included in liquid diet.

What is included in soft diet?

What is full diet?

Name ten articles of diet usually forbidden patients.

CHAPTER V

ROUTINE WORK

“The early months of a nurse’s training build the foundations for her future career as a nurse.”

Demonstrations.—Combing hair. Cleaning patient’s mouth. Adjusting bed-pan. Listing patient’s clothing.

Systematic Work.—From the day of her entrance into the hospital, the nurse should strive for system in her work. She will find a general routine established, but in many details she will have to make her own system. A good deal of her success depends upon her ability to get through with work comfortably to herself and to her patients. An unsystematic nurse works harder than is necessary, and is at the same time an annoyance to patients and other nurses. Modern *scientific management* is simply the finding of methods by which the greatest amount of good work can be done with the least expenditure of time and energy. Its principles are all applicable to nursing.

One of the important things in systematic work is the power to use one’s eyes. A good nurse is *one who sees everything which is in sight*. It is astonishing how much escapes the ordinary observer. The ability to take in at a glance everything in a room comes only with considerable practice, but one cannot begin too early to cultivate it. The nurse who can see but one thing to be carried from the room when there are four she might take will be slower in her work than one who is more observing. The nurse who sees a dirty spoon or a bed which is out of line is quite likely to be the one who notices that Mrs. Smith has slipped into an uncomfortable

position, that Mrs. Jones has a line in her face which indicates suffering, or that Mrs. Brown's pulse has an unaccustomed thrill to it.

Suggestions for Systematizing.—The nurse must often make her own rules for systematizing her work, but a few may be formulated.

Be thorough, get to the bottom of things, so that there will be no possibility of having to do them over.

When you enter a room, see if anything is different from what it was the last time you were there.

When you approach a patient's bed, look at his face and note any change in expression since last you saw him. Note his position in bed, and whether he appears comfortable or otherwise.

Before you leave a room, look to see that everything is in place, especially tables, bell, and window shades.

When you leave a room, never go empty-handed unless you are sure that there is nothing which you could take with you.

Never allow yourself to put anything, even for a moment, in any place except where it belongs.

Commit to memory the list of articles needed for any procedure, as bed-making, the giving of a bath, a douche, or an enema, and be sure that you have each item on the list before you begin.

Time yourself in the doing of things which do not involve the patient, such as tidying a room, making an empty bed, getting ready for a bath or a surgical dressing, preparing a tray, etc.

Count the movements which you make in doing some particular piece of work and endeavor to reduce the number of them. Such scientific *motion study* is of great value.

Daily Routine.—The daily routine differs in different institutions and varies with the number of nurses and the class of patients, so that no printed outline for it would be of any particular value.

Morning work usually means dusting and cleaning,

bed-making and changing, baths, enemata, douches and surgical dressings.

Evening work means smoothing and freshening beds inside and out, brushing out crumbs, bathing faces and hands, rubbing backs, straightening rooms, and seeing about supplies.

In any event, and with whatever arrangement, quick, systematic work involves seeing things, making as few trips as possible, thinking ahead, going directly from one thing to another, and making every move count for something. Five minutes spent in finding out what you have to do and in planning how you shall do it is time well spent. Five minutes devoted to preparing the material for your work may save a half-hour while you are doing it. The ability to go directly from one thing to another depends largely on forethought of this kind, and is the chief factor in getting through with a large amount of work.

For example, if a nurse knows that she has three baths to give and six beds to change, it is as easy for her to get at one time all the linen required for the work. If she has two patients whose nourishment is due at the same hour, she may as well prepare both at one time and carry them to the beds on one trip. If she is going to the bath-room with one basin, she may as well look about and see if there is not another which she can take. If one patient in a ward asks for a drink, a glance of inquiry will reveal whether she may not bring the same for one or two more. If she must wait a moment or two for a patient, she may occupy it in setting the room in order. These are small matters, but their observance saves an hour or two each day, makes the difference between being always on time and always behind time, saves annoyance to other people, and gives the nurse herself the satisfaction of being able to do work easily and quickly.

Above all, the nurse should strive to do her work *deftly*. If her previous training in physical culture and

in work with her fingers has not made her able to do things smoothly and easily, she should make it a point to acquire the necessary qualities as soon as possible. Constant effort and constant watchfulness are the only means of accomplishing it.

Morning Work.—If the day nurses come on duty a little while before the patients' breakfast is served, some baths or douches may be given in this time. Do not make the mistake of giving an enema before breakfast; it invariably destroys the appetite, if no worse, and the lingering odor is nauseating.

While the patients are eating, the bath-rooms, etc., may be given their first cleaning, plants and flowers may be attended to, early dressings prepared for, and work begun with fresh operative cases, fever patients, or those who are not served with trays.

Bear in mind that the sickest patients are entitled to first consideration. A convalescent who is insistent should not take precedence of the very ill person who is patient. The seriously ill patients should be made comfortable as early as possible, even though others may have to wait.

If a patient's bed is to be changed, a bath, a douche, and an enema given, and a surgical dressing done, try to arrange so that the bath and bed-changing come last, otherwise a certain amount of the work will have to be done twice.

If two or more enemas are to be given, prepare and give one, and while the patient is using the pan, start the second; sometimes even a third may be given before the first patient needs attention. Douches may follow one another in quick succession by using the same apparatus (if the cases are clean ones), moving the irrigator stand from one bed or room to another instead of returning it to the bath-room. Baths can be given more quickly if they follow each other closely, the preparation being made and the cleaning up done for all at the same time. This method of work answers equally

well for large wards where one nurse does a few things for many patients, or for private rooms where she has the entire care of a few patients. It is more satisfactory to the patients if they may feel that at least a part of their care has been attended to before their neighbors' entire routine is finished.

Toilet Basket.—In a ward of any size a toilet basket is a convenience and in a large ward it is a necessity. It should contain comb and brush—unless each patient has his own—soap and dish, whisk broom for brushing out crumbs, alcohol for rubbing, a bottle of mouth-wash, talcum or other dusting powder, zinc oxide ointment, and large and small safety pins.

Care of Patient's Hair.—The daily care of the hair should by no means be neglected, nor should it be left to the patient unless it is quite certain that he is both able and inclined to give it the needed attention.

A man's hair should be brushed and combed as carefully as a woman's. A bed patient cannot get at the back of his head with any ease and needs assistance. With your hand well under the back of his neck you can do the brushing and combing very thoroughly.

A woman's hair should, except in the rarest instances and by special order from the head nurse, be combed thoroughly once a day. If it be divided into two parts—or if very heavy into four—the process need not be very disturbing even to a patient who is seriously ill.

Spread a towel over the pillow. A special towel should be kept for this purpose. If this is not practicable, use the pillow case which you are planning to send to the laundry. Begin by brushing the hair; the small tangles come out easily with a brush where a comb might make them worse. The brushing should be done with a firm stroke, rather slowly. Both brushing and combing should be begun *at the ends* of the hair, never at the roots. Combing must be gently done, the hair being held firmly in the hand meanwhile so as not to pull.

Tangled Hair.—If the hair is tangled, saturate it with alcohol and brush well; this will help very materially.

Then take a small portion at a time, gently comb and pull it apart with the fingers. If the hair is very dirty, it should first be washed. It may occasionally be necessary to cut hair which is badly matted, but it should not be done without the advice of the head nurse and the patient's relatives. It is far better to take a good deal of time and patience than to sacrifice a pretty head of hair.

Washing the Hair.—The hair of a bed patient may be washed by turning her diagonally in the bed, so that her head will come over the edge; protect the bed with a



FIG. 11.—Combing hair.

small rubber sheet or Kelly pad, place the basin on a chair low enough so that the head will come a little distance above it and proceed with the washing and rinsing. Rinse thoroughly, or the hair will be sticky.

Vermin in the Hair.—For vermin in the hair tincture of quassia or tincture of larkspur should be applied freely, the head wrapped snugly in a towel and left for several hours or over night. These remedies do not injure the hair and need not be washed out. To remove

the nits, apply vinegar to loosen them from the hair and give a good shampoo.

Care of the Mouth.—The proper care of the mouth contributes as much as any one thing to the patient's comfort. It is, more than anything else, the mark of a good nurse. An unclean mouth may be the direct cause



FIG. 12.—Washing the hair of a woman patient in bed.—(*From Sanders' "Modern Methods in Nursing".*)

of disordered digestion; it may produce an infection of the ear through the Eustachian tube; or the mouth lymphatics may absorb infection which is carried to the whole system.

If the patient is not too ill to use a tooth-brush, he can clean his teeth better than you can do it for him. A bed patient who is able to turn and who has a reason-

able degree of strength may, with the assistance of a nurse, turn to the left side and, using a small kidney-shaped basin, do very well at brushing and rinsing. Many patients need to be reminded of this part of their toilet, and not a few get their first lesson in mouth-cleanliness in the hospital. If a patient has no tooth-brush, the family should be instructed to bring one promptly or the hospital should provide it. Twice a day is not too often for a patient to brush his teeth and use a mouth-wash.

One who is too ill or too weak must have it done for him. If a small tooth-brush is used, the back teeth can be gotten at more easily. Some sort of powder or paste should be employed, as the ordinary mouth washes do not scour enough. Salt or baking soda can be used in an emergency. The patient should always be required to rinse his mouth with some disinfectant, listerine, euthymol, etc. Lemon juice diluted makes the mouth feel clean and sweet. Chewing gum also helps.

If there are false teeth or a plate is worn, they should be removed twice a day and thoroughly brushed. If they are left out over night, they should be kept in clear, cold water.

Fever Patient's Mouth.—The mouth of a fever patient should be cleansed after each feeding, day and night, or it soon becomes filthy and is apt to be sore. If possible, use a small, soft tooth-brush at least twice a day (putting it to soak frequently in some disinfecting solution), and at other times scrub the teeth and the inner and outer surfaces of the gums with a bit of gauze put over the finger and dipped in the prescribed mouth-wash. Cotton or soft cloth is too smooth for this purpose and does not remove the material which accumulates on the teeth as well as the coarser gauze does. Sometimes a gentle scrubbing of the front part of the tongue gives comfort.

Placing and Removing Bed-pan.—If the hospital possesses more than one sort of bed-pan, the nurse may

find that different patients find different sorts the more comfortable. Try to remember whether your patient has a preference in this matter. Always screen a ward patient who is to use the bed pan.

In placing and in removing the pan, the back should always be supported, one hand being slipped under the sacrum, while the other pushes the pan into place. Neglect of this detail is responsible for much discomfort and for some bedsores.

The "slipper" bed-pan needs some sort of a pad on the part which comes under the back, in thin persons for comfort and in fleshy ones to catch any fluid which may trickle backward. Do not use a face towel for this purpose, but ask for a piece of an old spread or other cloth which may be kept for this purpose.

Never be guilty of giving a patient a cold bed-pan or urinal. Warm it first, no matter how much trouble it may be.

Until you are able to know by touch whether you have placed a bed-pan correctly, always look to be sure. Do not oblige the patient to tell you.

In giving the urinal, lift the clothing at the side of the bed and place the utensil within easy reach of the patient's hand. If you place it for a woman patient, be sure that it is well up between the thighs.

After the bed-pan has been used, cleanse the parts with a sponge or with toilet paper. If this is done in a matter-of-fact manner, it will be embarrassing to neither patient nor nurse.

Remember always to pull down the nightgown after removing a bed-pan; it is very uncomfortable to have it omitted.

Never carry a bed-pan or urinal for even the shortest distance without covering it with a cloth. Neglect in this is unsanitary and unrefined.

Getting a Patient Ready for the Night.—The following items need attention. None should be omitted.

See that face and hands are washed. (In private

nursing or on special cases, the hair also should be tidied.)

Wash back and axillæ.

Powder back if desired.

Have teeth brushed and mouth rinsed.

Have bed-pan used if necessary.

Pull lower sheet tight and smooth and straighten all bedding, changing if necessary.

Brush out every crumb which can be found.

Rub back, especially the lower part, with alcohol.

Smooth nightgown under back.

Give a fresh pillow.

Be sure that the bell is at hand.

Adjust the window and window-shades.

Set plants and flowers out of the room.

Admitting a Patient.—Never forget that to the average patient admission to the hospital is a good deal of an ordeal. She is apt to be nervous, uncertain, apprehensive, or even suspicious. Try to get the patient's viewpoint, and remember that kindness and consideration pay in every way. First impressions go a long way toward a patient's future contentment and a nurse's acceptability. It is always in order to speak a few reassuring words, even though the patient is seriously ill. As a matter of fact, nearly all who come to the hospital recover; the mortality rate in most hospitals does not exceed four or five per cent. and is sometimes less.

Be sure that you have the patient's name correct and know how to spell and pronounce it; also whether she is Mrs. or Miss. Unless she is very ill, introduce yourself, and tell her whether you are to be her nurse or whether you are looking after her temporarily. Be sure of her doctor. Chat a minute or two with her. You may ask how long she has been ill, but no other personal questions. Do not allow her to ask you questions about other patients; tell her at the start that you are not allowed to talk about them. Meantime, you can be

putting away her belongings, and if she is to go to bed at once, helping her to undress.

Tell her, if you can find out, when her doctor will be in or when a house doctor will see her. Explain about the day and night nurses and tell her when they go on duty. Show her how to call a nurse.

Do not leave a new patient sitting alone without some explanation. Treat her as a guest. Be attentive. Even ill-bred persons will respond to politeness on your part.

After the first promptly given attention, leave her to herself for a little while, before you start in with actual work for her. Nothing shows worse breeding or less common sense than for a nurse to take a temperature or start a bath before the patient has been in the room five minutes.

Temperature, pulse and respiration should be taken early, but not too soon, as temperature is apt to be lower and pulse higher upon arrival than they are a half-hour later.

Always ask if the patient has had a bath that day, as a preliminary to your work. Explain about leaving money or valuables in the office.

List clothing carefully, taking pains to include every article, and note whether there are one, two or more in number of any item. Take everything out of pockets, and include all articles in the list. If any are valuable, send them to the office for safe-keeping. Much trouble comes from careless listing of clothing. The list should always be signed by the nurse who makes it out. Examine clothing for vermin, especially in gathers and along seams. Exercise great care in folding and putting away clothing, so that it shall not be returned to the patient full of unsightly wrinkles.

If the newcomer is very ill, the nurse should note everything which she can about her condition. This may be done while putting her into bed and giving the bath. Note color, condition of skin, any deformities

or abnormalities, whether or not she is well-nourished, expression of face, position assumed in bed, mental condition, etc. Give attention to whatever she may tell you about herself. Note anything unusual upon the record.

With children, you will gain their confidence more readily if you go slowly. Talk to them, but do not attempt to do much for them till they have had a chance to become accustomed to their surroundings and to you.

REVIEW QUESTIONS

Give some rules which help in systematizing work and getting through with it rapidly.

Give suggestions to be followed out in morning work.

How do you comb a woman patient's hair?

What can be done with badly tangled hair?

How do you treat vermin in the hair?

Give some points upon the care of the mouth, especially that of a fever patient.

Why is the care of the mouth important?

Give points in placing and in removing the bed-pan.

Give list of things to be done in getting a patient ready for the night.

What is to be done in admitting a patient?

What are some of the courtesies to be observed with a new patient?

Give details in the listing and putting away of patient's clothing.

CHAPTER VI

BATHS

“Good nursing is attention to detail.”

Demonstrations.—Sponge bath to reduce temperature. Foot bath in bed. Hot pack. Cold pack.

Importance of Baths.—Baths are one of the most important remedial procedures of modern times. Whole volumes are being written concerning the external use of water. Each year more stress is being laid upon the subject and more science is being put into it.

Baths are given to keep open the pores of the skin and help excretion, prevent odor from perspiration, stimulate the superficial circulation, refresh the patient.

They may also be used as counter-irritants, to stimulate the whole circulation, to induce perspiration, to reduce temperature, as nerve sedatives or nerve tonics.

At first thought a bath seems a simple enough procedure, but when we know something of the physiological effects of water at different temperatures scientifically applied, we begin to see how much skill it takes to administer a bath so as to get the desired effect.

Careful physicians are very exact in their orders concerning the baths which they wish given, and when a nurse takes an order for a bath she should be sure that she thoroughly understands it. She will usually find the doctor ready to explain his favorite methods and to give the reasons for them. For example, a sponge bath to reduce temperature may mean several quite different things. To properly carry out an order involves knowing the physician's ideas, knowing the characteristics of the disease, learning the patient's

peculiarities, and not least by any means, becoming expert in the proper technic.

Care about Exposure.—In giving baths, a nurse needs to be on her guard, especially as she grows accustomed to the work, not to incur any unnecessary exposure of the patient. It is very easy to become careless in this matter, since it is often more convenient to work with the patient uncovered; but since almost any sort of a bath can be given without exposure, there is no excuse for neglect. Remember that bathing another person means an actual handling of practically every portion of the body, a proceeding of such an intimate nature that it should be conducted with the greatest possible delicacy. Many a patient, new to illness and to hospitals, has been shocked by the apparently deliberate carelessness of a nurse in this matter, and has thereafter felt that all nurses were lacking in modesty. There are few persons who do not appreciate the distinction between necessary and unnecessary exposure, and sick people are just as sensitive to these things as are well ones. A patient while in an agony of pain may feel that she does not care how a thing is done if only she be relieved, but will later go back to the incident with severe criticism of the one who was careless. In wards, always screen the bed before beginning a bath.

It is worth while to have had a personal experience in a good hydrotherapeutic establishment in order to learn some of the niceties of the various procedures.

CLEANSING BATHS

These may be either tub, sponge, or shower baths. If a patient be well enough to take her own tub or shower, she may be allowed to do it. If one is at all weak or nervous, it is wise to insist upon giving some help, as there is more or less danger of a fall in a slippery tub and consequent injury.

Tub.—Before the patient is taken in, be sure that the bath-room is warm, the tub spotlessly clean, the bath

mat in place, the water at a proper temperature, that there are plenty of towels, wash-cloth, soap, brush, and all things in readiness. When the patient comes in, be sure that she brings with her whatever clothing she is to put on afterward; place it where it will be warm and convenient to reach. If left alone in the bath-room, she should not be permitted to lock the door, and the nurse should remain just outside.

If the nurse is to help with the bath, have a light blanket or sheet ready to throw about the patient as she finishes undressing. This is left in the nurse's hands as the patient steps into the tub, and is laid on a chair to be used later. A towel is placed over the chest and abdomen, thus avoiding exposure; the bathing may be done under and around it. Plenty of soap may be used, and the back may be scrubbed with a brush. Let some of the soapy water run out of the tub and add fresh. At the end of the bath a gradual cooling of the water is desirable, as a preventive against chilling. A patient should not remain in a tub bath more than ten minutes.

As the patient steps out of the tub the sheet may be thrown about her, and the nurse, standing behind her may dry her back and legs with it while she does chest and abdomen with a towel.

The tub should be washed out immediately after use.

Shower.—For giving a shower bath, the patient is wrapped in a sheet and her hair protected by a rubber cap. The water should be turned on and regulated to the proper force and temperature. The nurse receives the sheet as the patient enters the shower, helps her to soap herself and rubs her if she wishes it, keeping always behind her. She is dried as after a tub bath.

Practically, a shower bath cannot be well given in an ordinary hospital, unless the patient is in condition to do most of it herself. One cannot properly assist without being dressed in a bathing suit.

Theoretically, a shower is the only correct form of cleansing bath. In a tub bath the dirt is washed on to the skin again after having been once removed. In a shower, the dirt is carried away and a continuous supply of clean water furnished.

Baths for Obstetric Patients.—In obstetric cases, particularly in multiparæ, there is some likelihood that the dirt which has been removed from the skin in a tub bath may be washed into the vagina and become a source of infection. It is for this reason that many obstetricians order shower baths for their patients.

If a shower is ordered and no apparatus is available, the following method answers very well as a substitute: fill the bath tub partly full of warm water and have at hand a pitcher of about a gallon capacity. Have the patient stand in the tub with her back toward you. Pour water of a correct temperature over her from the pitcher, rub her with soap, using wash-cloth or brush, and rinse her by pouring over her several pitcherfuls of clear water. If the physician asks that the shower be followed with bichloride, a pitcherful of the solution may be poured over her while she stands in the tub.

Temperature of Baths.—Always use a thermometer to ascertain the temperature of a bath. Do not depend upon guessing. A hot bath is 100°F. or over, never more than 110°.

A warm bath is 95° to 100°. (For a warm sponge bath, the water should be over 100° in the basin and pitcher, as it cools rapidly.)

A tepid bath is about 85°.

A cool bath is about 70°.

A tub bath for a young baby should be 99° or 100° when prepared, so that it will be about body temperature when the child is put in.

As a child grows older, the temperature of its bath may be reduced. A temperature of 90° will be warm enough for the cleansing, with 60° to 70° for the finishing.

Sponge Bath.—Have everything in readiness before you begin the bath, as *a nurse should not leave her patient during a bath*. The articles required for giving a bed bath are: two bath blankets, preferably old ones, a good-sized bath towel, a face towel, two wash-cloths, soap, alcohol, a wash basin, a large pitcher of hot water, a slop jar, and a hot water bag. If the patient is to put on a fresh gown, it should be in readiness, and if the bed is to be changed afterward the linen for it should be at hand. The bed and body linen should be aired and warmed before being used.

Loosen the bedding all around, place a hot water bag at the patient's feet, turn her on her side for the placing of the bath blanket and the removal of one side of the gown; turn her to the other side, finish removing the gown, smooth the blanket underneath, and place the top bath blanket in position. For a very ill patient the lower bath blanket may be dispensed with and the bed protected with towels. Use one light blanket over the patient.

Spread the face towel over the pillow under the patient's head, and bathe the face first. Keep the ends of the wash-cloth well up in your hand so that they shall not drip or drag over the skin. Get well into the corners of the eyes, around the mouth and nose, in and behind the ears and under the chin. Do not put soap upon the face unless the patient wishes it, or unless the skin is greasy. Rinse the face well, with due care for neatness, and dry gently but thoroughly with the towel which is under the head. This towel may then be removed and put away with the wash-cloth.

Using the second wash-cloth, bathe the arms one at a time, keeping the other covered. Spread the towel under the part you are bathing so that it will be near when you wish to use it for drying. Take hold of the wrist and raise or lower the arm as desired; pay special attention to the axilla. The hands should be put into the basin, not simply wiped off; spread a towel on the

bed where the hand will naturally come, set the basin on it, and let the hand come over the edge into the water. Scrub the nails with a brush if desired. As you remove the basin, the hand drops on the towel ready to be dried.

Next bathe the chest, then the abdomen, keeping the blanket well over the patient and reaching under from the side. Use a circular stroke.



FIG. 13.—Foot bath in bed.

By this time the water in the basin will need renewing. The patient may be turned and the back done next, not forgetting the back of the neck. The gown may then be slipped on. Each thigh is done separately, the knee being bent for greater convenience, then the leg from knee to ankle. Then the genitals are bathed, a man patient, of course, performing this office for himself. Lastly, bathe the feet, which like the hands, should

always be put into the water. Spread the towel over the foot of the bed, using a small rubber sheet under it if necessary, set the basin (not too full) on it, and lift the feet one at a time, by the ankles, into it. For safety's sake, the bathing should be done with one hand and the basin steadied with the other. For calloused spots on feet or knees which do not come clean readily, use a little sapolio.

Care of Nails.—The care of finger and toe nails is a part of the bath and should not be omitted. A patient who is well enough may care for her own finger nails, but the toe nails are usually the nurse's care. They should be trimmed and cleaned as often as is necessary to keep them in good condition.

Alcohol Rub.—An alcohol rub should follow the bath. It may be given by rubbing each portion of the body as soon as it is bathed, or the whole body may be rubbed after the bath is finished.

Patients who are fleshy or perspire freely will find powder a great comfort. Use plain talcum powder, dusting it in the axillæ, the groins, over the back, and any other parts desired.

Neatness.—Absolute neatness with a bath should be the rule. There is no more reason for a room being in disorder during the giving of a bath than at any other time. The bedding and clothing which are not in use should be folded neatly and placed on a chair. The bed should be kept in reasonably smooth condition, and the nurse should see to it that she and her patient are not ashamed if the doctor or head nurse comes in during the bath.

BATHS TO REDUCE TEMPERATURE

Less attention is paid than formerly to reducing temperature. Some investigators claim that fever, especially in infections of any sort, is one of nature's modes of protection.

Sunstroke is one of the few conditions in which high temperature is of itself considered dangerous.

Sponge Bath.—The cold sponge bath is given in different ways, and it is wise to find out from each doctor which method he wishes used. Ascertain in particular whether considerable friction is to be used or very little, as the authorities do not agree upon this.

A common method is as follows: protect the bed with a long rubber sheet covered with a blanket, remove the patient's clothing, and cover him with a second blanket. You will need a bath towel, two wash-cloths, two (or four) sea-sponges, a pitcher of cold water, a basin of cracked ice, a hot water bag for the feet and an ice bag for the head. Place the hot water bag and the ice bag, and put a sea-sponge wrung out of ice water in each axilla. As the bath progresses, these sponges are to be changed frequently, every two or three minutes. They come close to the main artery of the arm and near the chest and help very materially in the cooling process.

Begin with tepid water, wetting the patient's entire body, using wash-cloth or sponge. Cool the water and go over again, rubbing more or less vigorously, changing the cloth often enough to keep it cool. Add ice to the water, making it gradually colder, and changing often enough to have it perfectly clean.

Do most of the sponging on the broad surfaces of back and chest, and on the inner surfaces of the thighs and arms where the large blood-vessels lie. Go over and over the body, slowly. Rubbing stimulates the circulation and helps to cool the blood current; it may be done a part of the time with the bare hands, but should be kept up throughout the bath. Do not rub the abdomen, but bathe it gently. A thin towel, wet first with cold and then with ice water, spread over the abdomen and changed frequently, gives almost as much cooling as sponging and rubbing would.

The sponging and rubbing should be continued for twenty minutes or whatever length of time is ordered.

Keep in mind that you are trying to cool the blood current, not simply the surface of the body.

Try to work smoothly and soothingly, and to disturb the patient as little as possible. A nurse who is calm and restful in her manner will get a temperature down, when one who is fussy or nervous in her movements will find it still rising after her utmost endeavors.

Taking Temperature after Bath.—In order to judge of the result which has been obtained, the temperature should be taken one-half hour after the bath is finished. If it has not come down perceptibly in that time, an order may be given to repeat the sponging, either immediately or in two hours. A typhoid temperature will sometimes not yield, except for an hour at a time, until several days of hard work have been done.

The Cold Pack.—The cold pack is sometimes more efficient in reducing temperature than the cold sponge. Protect the bed as before; wring a cotton sheet out of cold water from the faucet, wrap the patient in it, cover with a light blanket, and leave twenty minutes to one-half hour. The hot water bag at the feet and the ice bag on the head should be used as in the sponge bath.

The Fan Bath.—For this, the patient is wrapped in a sheet wrung out of cold water; or he may have a large wet towel placed under the back, another over the abdomen, and the arms and legs wetted by sponging. He is then fanned with a palm-leaf fan, the evaporation produced making the requisite cooling.

The cold pack and the fan bath are excellent for children and for patients who chill easily. They sometimes reduce the temperature of a nervous patient when sponging has little effect.

Affusion.—The bed may be protected with a rubber sheet raised at the edges and top by a roll of blanket placed under it and having an extra piece at the bottom to conduct the water into a tub or pan placed there. The patient has a towel spread under the back and one over the chest and abdomen. The nurse, using a flower

sprinkling can, sprinkles water over every part of the body. Begin with water at a temperature of 80° F., holding the can only a few inches above the patient. Cool the water with ice to about 60° F., and hold the can higher as the patient becomes accustomed to the sensation. The sprinkling may last about fifteen minutes.



FIG. 14.—Bed bath arrangement. One corner of the rubber cloth is pulled back to show the rolls of blankets forming the sides of the trough. A sheet is placed on the bottom of the trough to prevent the body of the patient coming in contact with the rubber cloth.—(Paul.)

HOT BATHS

A **hot tub** is almost never given in a hospital, though a warm one may be ordered for its soothing effect. A tub bath of a temperature above 100° F. is not altogether safe for any one in poor health, as it has a somewhat depressing effect. Nurses should remember this in giving a tub for cleansing, for if the water is too hot there is danger of fainting, etc.

The Hot Pack.—This is used to induce perspiration in uremic and other cases, for soothing in delirium, mania, etc. It is often helpful in nervousness, and may be used with good results with fretful children.

Protect the bed with a long rubber sheet. Remove the patient's clothing. Put a thin blanket under him and two or three over him. (Do not use good blankets for this purpose, but old, worn ones.) Two persons then wring a wool, or part wool, blanket out of hot water; this may be done by immersing all but the ends which are held with a firm grip and twisted, each person twisting in an opposite direction; or a clothes wringer may be used. The water must be quite hot, as the necessary handling cools it rapidly.

The patient, turned upon one side, is quickly wrapped in the hot blanket, care being taken that it does not burn. This should be done by two persons, as unless accomplished quickly and skillfully, the wet wrapping will be either too hot or too cold and so ineffective. It should be done under cover as far as is practicable. The dry blankets which are over the patient should be tucked snugly about him, the rubber sheet brought quickly up around and over the whole and fastened with large safety pins. Additional blankets may be used to keep the heat in, but the rubber is usually sufficient.

The patient is left in the pack from one-half to one hour, depending upon his condition and how well the heat is maintained. Sometimes there will be an order to renew the pack, in which case a second blanket must be wrung out and made ready to apply before the cool one is removed.

An ice bag or cold cloth should be kept on the head while the patient is in the pack. The pulse should be watched. (It may be taken at the temple or in the neck.) If it is desired that the patient perspire, frequent drinks of water, either hot or cold, should be given.

Hot Air Bath.—This is given in several ways. If the patient is able to be up, a folding cabinet may be used,

the patient sitting in a chair; or if this is not at hand, a large, heavy blanket may be fastened closely about his neck and spread out, tent-fashion, on the floor. The patient, with his clothing removed, is seated in a chair with a solid bottom, and a large alcohol lamp or small alcohol stove is set underneath and lighted. (This should be set in a pan for safety.) The heat from it causes the patient to perspire. The feet may be put into hot water if so desired. A cold cloth or an ice bag should be kept upon the head. Water to drink should be given frequently, to aid in inducing perspiration. The pulse should be watched, as many persons become faint from the heat; at the slightest indication of any weakness in the pulse, the patient should be removed from the bath and made to lie down. It is well to find out beforehand how long the bath is to be continued. From seven to fifteen minutes is the usual time.

Upon leaving the tent or cabinet, the patient is quickly wrapped in a wool blanket, put to bed, covered warmly, and left to continue the perspiration.

Hot Air Bath in Bed.—Place the patient, with clothing removed, on a long rubber sheet covered with a blanket. Put over him two large bed cradles which shall support a covering of several blankets. Tuck the covers in snugly on all sides, especially at the neck. Have an alcohol stove or lamp burning near the bed and conduct the heat from it under the covers by means of a joint of small-sized stove-pipe or a tube made of cardboard or heavy paper.

The same effect may be produced by using one or more large electric lights hung inside the bed cradles. Their heat will be sufficient to induce perspiration. The following precautions must be taken; do not let anything come into contact with the electric bulbs, or it will be scorched; do not the bulb get wet, or they will burst; do not let the electric cord get wet, or the current may be "short circuited."

Continuous Hot Air Baths for Burns.—Put a sterile sheet smoothly under the patient, use one or more bed

cradles over him, washing them carefully just before placing. Place another sterile sheet over the cradles. Hang electric bulbs inside, using a size which will produce a constant temperature of about 96° F. Use thermometer and watch that temperature does not go too high.

Vapor Bath in Bed.—The same arrangement as for a hot-air bath may be used, except that a small tea-kettle



FIG. 15.—Hot air bath arrangement. Part of covering blanket is raised to show the arrangement of the apparatus.—(Paul.)

is kept boiling by means of the alcohol stove and the steam from it is conducted under the covers by means of a rubber tube. In this case special care must be taken not to burn the patient.

Close of Bath.—The finishing of a hot bath is all-important. Since one is usually given to induce perspiration or at least to open the pores of the skin, there

is great danger of chilling after it. These baths are often given to promote elimination which has been impaired by inactive or diseased kidneys, the point being to keep

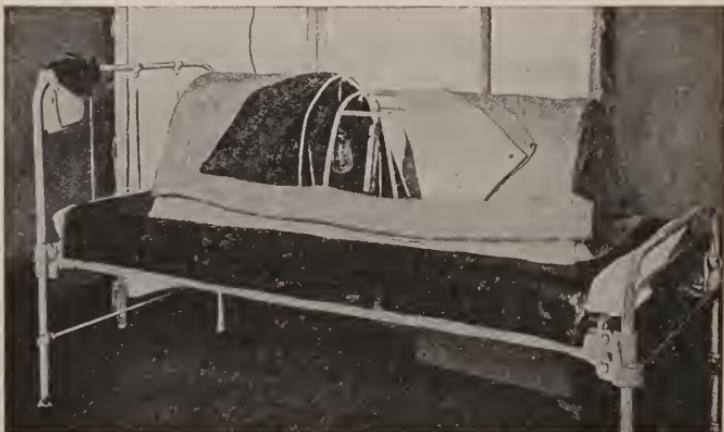


FIG. 16.—Cabinet arranged for giving sweat-bath with the electric light, Polyclinic Hospital, Philadelphia.—(From Sanders' "Modern Methods in Nursing.")



FIG. 17.—Simple arrangement for giving a hot-vapor bath.—(Stoney.)

up the perspiration for a considerable length of time, and then to check it gradually. If the patient becomes chilled at the close of the bath, additional work may be

thrown upon the very organs which we are trying to assist, and harm done rather than good.

When, therefore, the treatment is finished, dry the patient under the covers, taking great care that no draft of air strikes him during the process. Remove the rubber sheet and blankets carefully, not occasioning the least exposure. Go over the entire body again with a dry towel, slip on the gown underneath the covers, and remove the blankets one at a time.

Electric Light Bath.—The electric light bath is sometimes used in place of a hot air bath. A special cabinet is required for it, the heat being produced by many incandescent electric lights placed inside surrounding the patient. This apparatus is of advantage because by using many or few lights the heat can be controlled with more exactness.

The Sitz Bath.—This may be ordered for menstrual or pelvic disorders. A special tub is needed to give it properly, as only the hips are to be immersed. The water should be as hot as can be borne and should be kept hot for the prescribed length of time. If no proper tub is available, an ordinary wash-tub propped at an angle with the edge well padded, will answer. A sitz bath may be given in a bath-tub, but it is not very satisfactory, as the feet and legs are of necessity included.

Salt Bath.—This is used as a tonic treatment. It is made by dissolving about two pounds of sea-salt in a tub of water. It should not be too warm.

Baby's Bath.—A sponge bath is given to a baby in much the same way as to an adult, bathing one part of the body at a time, and keeping the rest covered. It is much more convenient to bathe a baby lying on a table than to employ the old-fashioned method of holding it in your lap. Put a heavy blanket over the table, and place a hot water bottle filled not too full between its folds. Lay the baby on this, wrapping it in a light bath blanket or in a soft, thick towel. The basin, soap, powder, etc., should be set near by and the clothing,

safety-pins, etc., within reach. The room should be warm, a temperature over 70° being desirable.

For a baby's tub bath, the water should be prepared and tested with a thermometer. The toilet articles, towels, and clean clothing should be at hand. The tub may be set upon a chair which is protected by a towel. The child is undressed on the warm, padded table, and its face washed and dried first. It is then wrapped in a soft, thin towel, and with the left hand under its head and shoulders, one finger extending into the arm-pit to afford a firm hold, the right hand grasping the feet and legs, it is lowered slowly into the tub. The left hand should be kept in place and the right hand used for the bathing.

If a baby is put suddenly into a tub, if the water is not of the right temperature, or if its body comes into direct contact with the hard surface of the tub, the impression produced may be so disagreeable as to cause a permanent dislike of baths. This is an important reason for attending to such details.

A pure white or castile soap should be used for a baby's bath, never one of which the composition is uncertain. Very little soap is required, and it need not be used every day. Pay especial attention to the hands and feet and to the folds of the groins and buttocks. When the chest and abdomen have been bathed, the child may be turned over, the left hand supporting the head and chest, and the back bathed.

Some modern hospitals have installed apparatus for bathing babies by means of a spray. The slab on which the baby is laid should be warmed and covered with a thick towel. The temperature of the spray should be about 100 and its force should be gentle. This method is more thorough and rational than putting the child into a tub. Spray baths of this type may also be used for older children or for obstetric cases.

When the bath is finished, the child should be lifted quickly out on a soft, dry towel and wrapped up. The

drying should be done gently, with care that no dampness is left in the folds or creases of the skin.

The Continuous Bath.—This is used in some skin diseases, in burn cases, in mania, etc. In mania the bath is continued for two or three hours at a time, but in the former troubles, the patient may be left in the bath day and night.

A bath thermometer should be used and the water maintained at the temperature ordered. A rubber air-pillow should be provided to support the head; it may be fastened by tapes or bandages going under the tub. A heavy blanket is thrown over the top of the tub to help to keep in the heat. A special nurse is usually detailed for a case of this sort.

The bath may be ordered at body temperature or slightly above, and the water must be frequently renewed to keep it at that point. The patient is taken out for urination, bowel movements, and any special treatment, also usually for meals. Some patients prefer to stay in the bath as much as possible because of the comfort which it gives. If the patient should fall asleep while in the tub he must have careful watching to prevent accidental drowning.

Partial Baths in Infections.—Continuous baths to a portion of the body are commonly used in cases of infection. An infected hand or foot may be kept in a tub of warm antiseptic solution. A foot tub, set on a table or chair may be used in these cases, but it is easier to manage with a tub specially designed for the purpose and fitted with a close cover. Put the limb in a cloth sling and make the patient comfortable with plenty of pillows.

REVIEW QUESTIONS

State the chief uses of baths.

State in detail the technic of giving a tub bath for cleanliness.

How would you bathe an obstetric patient if a shower is ordered and the hospital has no apparatus for it?

What is the correct temperature for a hot bath? A warm bath? A warm sponge bath? A tepid bath? A cool bath? A tub bath for a young baby? For a child?

Tell in detail how you give a sponge bath for cleanliness to a bed patient.

Tell in detail how to give a sponge bath for the reduction of temperature. How soon after a cold bath should the temperature be taken?

Give the technic of a cold pack. Of a "fan" bath.

Give the technic of affusion or sprinkling.

Tell in detail how to give a hot pack.

How may a hot air bath be given in bed? By means of a cabinet or tent? By means of electric lights?

How is a continuous hot air bath managed?

How may a vapor bath be given in bed?

How is a sitz bath given?

How do you prepare a salt bath?

Give the technic of a baby's sponge bath. Of a baby's tub bath.

What points are to be observed?

For what is the continuous bath used, and how is it managed?

CHAPTER VII

THE PATIENT'S COMFORT

"It is only by doing a thing over and over that one does it easily, and behind all the practice of the nurse quite as much as in the practice of the musician must be the spirit which animates it and makes real music of the one and real nursing of the other."

Demonstrations.—Dressing and undressing patient. Lifting and handling of patients. Getting patient up in chair.

Practice alone makes perfect in the handling of patients and the nurse must expect to do a thing many times before she acquires the desired skill. On the other hand, practice will not make entirely perfect unless one at the same time strives for dexterity. Keep always in mind that you are to endeavor to work easily and smoothly, gracefully if possible, and as noiselessly and unobtrusively as may be.

How to Give a Rub.—A good rub is one of the things most appreciated by the patient. It takes some instruction, some skill and more practice. The touch is all-important; it should not be so light as to tickle or make one nervous, nor should it be at all harsh. A firm but gentle touch is the ideal to be striven for.

In order to give an acceptable rub or to handle a patient with comfort to him, the nurse must take care of her hands. Rough, hard, cold hands cannot but annoy, while a soft, smooth, warm, gentle hand brings infinite comfort.

In rubbing with alcohol, wet the hand just enough so that it does not drip. To see a nurse take a handful of alcohol, slap it on a patient's back and then proceed to distribute it as best she may, stamps her as lazy and thoughtless if nothing else. On the arms and legs use

both hands for rubbing, on the chest and back usually but one. The stroke should be rather long, not too quick, firm enough to stir the circulation, yet light enough to glide over the skin without pulling. Try all the time to think of the muscles and blood-vessels under your hand, and endeavor to reach and stir them. Forget the skin as far as possible, except that you are not to let your fingers pull or pinch it. Use the whole hand, palm and fingers, almost grasping the flesh with it. Do not use the ends of the fingers too much.

Undressing a Patient.—Loosen buttons, hooks or strings as far as you can reach, and remove as much clothing at once as you conveniently can. Put the clothing on a chair, and see that it is sorted and folded promptly. If there is an injury or painful part, remove the clothing from the opposite side of the body first, so that you may have it free and be able to exercise the necessary care in handling. When it is necessary to cut clothing off, cut close to the seam or rip if there is the slightest chance that the garment may be used again. If a nightgown or shirt is to be opened all the way down, tear rather than cut. To remove a tight-fitting shirt or undervest, pull it up under the back, gently lift first one shoulder and then the other, get the garment into a roll at the back of the neck, slip it over the head, and remove the arms last. When taking off skirts, have the patient bend the knees.

Dressing a Patient.—In putting on a shirt or slip-over nightgown, put on the sleeves first, pulling them well up to the shoulders, then making a roll of the back of the gown from neck to hem, slip it over the head; it may then be pulled down, under one shoulder, then under the other, then under the hips. If the clothing opens all the way down, turn the patient on one side, slip in one arm, pulling the garment as far up to the shoulder as it will go, tuck it well under the back, roll the patient to the other side, and slip on the second sleeve; in putting on the sleeves, let the arm go down, not up. An injured



FIG. 18.—Turning patient in bed.



FIG. 19.—Lifting patient in bed.

arm or leg should be dressed first; reverse the process in undressing. Always pull gown well down, and be sure that it is smooth under hips and shoulders.

With a helpless or paralyzed patient, do not pull sleeves on in the usual way, but put your own hand through the wrist of the gown, reach up and draw the hand through. In putting on stockings, turn them back and roll them down far enough to get the foot on smoothly; do not pull them on by taking hold of the top, and do not pull them off by taking hold of the foot. Take hold of the part you are trying to adjust.

Handling and Lifting.—In handling a bed patient, consider the body as having two parts, the shoulders and the hips. Except in unusual cases, the head and feet will take care of themselves. Think that you are to move, not only the patient's flesh, but his bones. Be sure that you have hold of the framework of the body, not simply its exterior. Use the whole hand, not merely the fingers. If these things are kept in mind, the hands will not slip and pull.

Turning in Bed.—To turn a patient in bed, slip one hand well under the hips, the other well under the shoulders, so that your fingers go beyond the spine. Lift slightly and roll him over. Bend your own body from the hips, not from the waist. (Practise doing this from both sides of the bed, rolling the patient toward and away from you.) Then, standing at the back, slip one hand well under the hip, the other just below the buttock; get a firm hold of the hip bone and pull the hips gently back toward you, lifting slightly at the same time; this gives the bend of the body which is necessary for comfort.

With a patient lying on his side, a pillow put lengthwise reaching from shoulder to thigh, and tucked well under the back, affords support and rest. A small, thin pillow between the knees or one tucked under the abdomen to support it, gives much comfort. With fleshy people, a thin, narrow pillow may be put at the waist.

When the patient is lying flat on the back, he is usually more comfortable with the knees drawn up. They need support, however, and a large, rather firm, pillow or a knee-roll filled with hair is used. This pillow or roll should always have a rubber cover under the white slip.

Lifting a Patient about in Bed.—Lift shoulders and hips separately. Slide one arm diagonally over the



FIG. 20.—How to lift an injured or painful leg.—(*Aikens' "Home Nurse's Handbook of Practical Nursing."*)

shoulder which is nearest you, the other arm under the opposite shoulder until the fingers of the two hands touch or overlap at the back; this gives a firm hold and makes the lifting of even a heavy patient comparatively easy. For the hips, use the same method, one arm going diagonally under one hip, the other diagonally over the other hip, till the fingers meet.

Always have the patient bend the knees when you are

lifting the hips, as it takes off much of the weight; without this precaution, lifting may be impossible. Lift with your own back straight, bending from hips or knees, not from the waist.

Lifting Limbs.—A painful or injured leg may be lifted by putting one hand under the ankle, the other under the knee. Never lift the leg by grasping the foot. In lifting an arm, put one hand under the elbow, the other



FIG. 21.—Showing foot-sling, for supporting patient in the upright position.
(From Sanders' "Modern Methods in Nursing.")

under the wrist. Support of the *joints* gives a firm and comfortable hold.

Patients Who Slip in Bed.—If a patient persistently slips up in bed, put one hand well under the hips, the other under the shoulders, and without much attempt at lifting, drag him down. Your hands prevent pulling.

With a patient who constantly slips down in bed (always a bad symptom, indicating great weakness and low vitality), you need help unless the patient is very

light. One person stands on each side of the bed, each with one hand under the shoulder and the other under and slightly below the buttock; at a word, they partly lift and partly pull the patient toward the head of the bed. To do this alone, have the patient flex the knees, put one arm behind her shoulders with the fingers in armpit on the opposite side; place the other arm just below the buttocks.

Setting a Patient up in Bed.—If you are to use pillows or back rest, practise first with someone to place them for you. Slip one arm diagonally over the shoulder nearest you, the other under the shoulder away from you, and if the patient is heavy, have her clasp her hands around your waist; in this way you may lift a heavy patient without difficulty. (A man patient may take hold of your shoulder.) After you have learned to do it in this way, try holding the patient with one arm, and placing the pillows or back rest with the other.

Support in Sitting Position.—A patient sitting up in bed invariably needs a firm pillow under the knees to prevent slipping. A sand bag placed just below the buttocks is also good.

A swing often makes a person comfortable and secure while sitting up in bed. Take a large bed sheet, fold it diagonally and tie it by the ends to the head rail of the bed, letting it come under the patient's buttocks, hammock-fashion.

A folded sheet fastened across the bed so that it supports the feet, is a comfort to many persons. It is not suited to abdominal cases.

Getting into Chair.—In getting a patient up into a chair for the first time, she may either sit near the edge of the bed, dropping her feet over the side, and with the nurse holding her firmly around the body under the arms and lifting slightly, she may swing herself off the bed and into the chair which stands close by; or she may be lifted bodily from bed to chair. Always give a footstool.

Getting Back to Bed.—Putting a patient into bed from a chair is the reverse of the above process, but is more

difficult, as the bed is usually higher than the chair and some lifting is required to pull the patient up that distance. It may be done by placing one arm under the patient's shoulders with your fingers in the armpit, and the other arm under the buttock. The patient meantime puts one arm over the nurse's far shoulder, the other under her near shoulder, and clasps her hands. Tell her to make herself stiff and to push up with her feet as you lift. Set her on the edge of the bed, and have her gently tumble into it while you lift her legs and feet.

Lifting from Bed to Stretcher.—To lift a patient from bed to a stretcher, to a cot, or to a chair, or from one bed

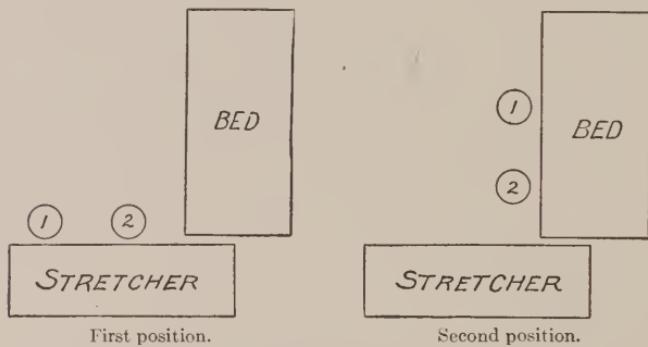


FIG. 21a.—Transferring patient from stretcher to bed.

to another, first place the bed, stretcher, cot or chair *at right angles* with the bed on which the patient lies and as near to it as possible, the head being toward the bed. If the patient is very light, one nurse may do the lifting, but not otherwise. (There is no virtue in attempting a thing too hard for you and one which involves danger of injury.) Put one arm well under the patient's shoulders around to the opposite side, the other under the buttocks until you grasp the opposite hip, and have the patient put her arms about your neck. Lift her off the bed, swing half-way around, and with a step or two you may reach the place where you wish to deposit her.

When two persons do the lifting, one may put an arm under the shoulders and the other under the waist, the other person putting one arm under the hips and the other under the upper part of the thighs. The points to be noted are to get the arms well under so as to obtain a firm hold, and to see that the bed or stretcher to which the patient is to be moved is properly placed. Be sure that each person knows exactly what she is to do, and when, before the procedure is started. Step out of step, one person with the right foot, one with the left. (Figure 21a shows the positions to be taken.)

If the patient is to be changed from one bed to another of the same height, the two beds may be placed side by side and the mattress with the patient on it pulled over. If the mattress is to be left, the patient may be moved by simply pulling him over on the draw sheet.

Bed Sores.—Patients who are very thin, who have fever, who are paralyzed, whose nutrition is bad, whose circulation is poor, who have involuntary bowel movements or urination, or who for any reason have to lie long in one position, easily develop bed sores.

These are apt to come at the lower part of the back over the sacrum, over the hip bones or over the shoulder blades. They may occur on heels, elbows, ears, etc., or even on the back of the head.

A bed sore, except in the rarest instances, proclaims poor nursing. In some hospitals they are more or less common, in others practically unknown. The thoroughness of the nursing can be judged by their frequency.

Bed sores are due to pressure (this interfering with the circulation), moisture, and lack of cleanliness. Wrinkles in the draw sheet are a common cause. These things are preventable.

Pressure may be avoided by using circular air cushions or rings made of cotton batting wound with a bandage, etc. Frequent change of position, whenever it be possible, is important. The slightest redness should be reported to your head nurse.

Except in cases of incontinence of urine or feces or in freely draining wounds, there is no excuse for moisture and consequent uncleanliness. Clean linen, bathing with soap and water, rubbing with alcohol, dusting with talcum, boric powder, or bismuth subnitrate, etc., if frequently and thoroughly done, is effective in most cases.

One of the chief things to remember is that cases having a tendency to bedsores need *frequent attention*. No matter how thoroughly the work may be done, once or twice a day is not enough. Bad cases must be attended to every few hours if success is expected.

In cases which are constantly wet, powder, alcohol, etc., do very little good. Some substance which will resist water, as zinc oxide ointment, castor oil, camphorated oil, or a mixture of mutton tallow, olive oil and carbolic acid 1 per cent., should be used. A thick layer of castile soap, used often, is very effective. Alcohol should never be used when the skin is broken.

Knees and elbows may get irritated or sore from rubbing with the bedclothes. Apply zinc oxide ointment or cold cream and a dressing of old muslin or linen, not gauze.

If a bedsore has actually occurred, no young nurse should take the responsibility of prescribing for it. Even if it is no more than an excoriated spot on the skin, she should appeal to her head nurse or to the doctor and insist that they look at it.

Special Points.—Never expose a patient more than is absolutely necessary. Use bed screens.

Do not sit on a patient's bed. Do not rock.

Note light shining directly in the patient's eyes, and either screen or change position.

Change and freshen pillows without being asked.

Suggest change of position before the patient becomes uncomfortable and asks for it.

Explain procedures before you begin them, especially those involving some apparatus.

Never discuss a patient while on duty; either he or a friend may overhear.

See that your patient is mentally comfortable. Find out if anything is worrying and either do something about the trouble yourself or report it to someone who will.

Chronic Patients.—The care of chronic patients, persons who are in the hospital week after week or month after month, involves many points which do not come up at all in acute cases. The nurse is apt to lose interest in these slow, discouraging conditions, but it is a fatal mistake to allow the patient to become aware of it. If the patient once suspects that his nurse is finding another patient or case more interesting than himself, he is likely to imagine slights or neglects which have no real existence. Try very hard and very often to put yourself into the patient's place, and think how things would look if you were in that situation; remember especially the long hours when nothing happens, and when these people have almost nothing to think about except themselves and their ailments.

Do not ask chronic patients each day how they are. Greet them instead with "Good morning. Isn't it a nice day?" or "How would you like to be out in this rain?" Be sympathetic and attentive in listening to whatever they have to say about themselves, but lead away from the subject as soon as possible. Always speak with an encouraging tone and manner even if you cannot say that you have definite hope of their recovery. A young nurse is not fitted to discuss symptoms or cases nor to judge concerning them. Remember that nearly everyone gets well eventually, and that even persons who are given up to die sometimes recover.

Do not forget that a mattress which is in constant use for a number of weeks becomes uncomfortable. Put your patients into fresh beds at least every few weeks. If you cannot obtain another mattress, get the patient out on a cot for half a day while the bed is beaten and sunned and aired.

If possible, change the location of the patient's bed

occasionally. Anyone tires of looking at things from exactly the same angle. With private patients, a complete change of room may sometimes be a benefit.

Try for variety in diet, not so much from one day to the next, as from one week to the next. If your patient mentions anything of which he is especially fond, see if it cannot be procured for him.

If the patient is allowed to sit up, encourage him to do so, promoting the idea that it means progress. If he is inclined to overdo, explain the reasons for being quiet. Do not think that he should know, but remind him.

Find out if there are special persons whom your patient would like to have call and devise some means to remind or ask them to do it.

If you are going downtown, do not forget that the patient may like some small errand done, but hesitates to ask you. Surprise the "poor old chronic" occasionally with something brought from the outside world, an unusual postcard, a catchy or charming poem, a striking magazine picture, something which they can look at rather than something to eat.

If chronic patients are able to do anything (as usually they are), try to get them at it. Express a desire for something which they can make. Give them something to look forward to, to plan for, or work for.

Occupational therapy, so-called, frequently gets results when treatment and medication have failed. If an occupation has been prescribed or approved by the physician, encourage the patient to continue it; see that she has the materials; or that she goes to the occupation room or shop at the proper times. (See Chapter XXII.)

Remember that persons long ill magnify trifles, and that unimportant details become to them tremendous items. Try to bear in mind that Mrs. Brown always wants green tea, that Mrs. Jones never eats eggs, that Mrs. Smith always sleeps on her left side and wants her bedside table handy, that Mrs. Jackson always wants an extra blanket over her feet, etc. When you go to an-

other ward, tell the nurse who is your successor these little peculiarities, and the patients will appreciate it beyond measure.

Do not get into a rut in the care of chronic cases. Be on the watch for new symptoms. A change which seems unimportant, and which only the nurse may have opportunity to observe, may be the beginning of serious trouble, or may indicate an unexpected chance for recovery. If these things be promptly reported, they give the physician opportunities which he might otherwise miss.

REVIEW QUESTIONS

- Tell how to give a good alcohol rub.
- How do you undress a bed patient?
- What points are to be observed in dressing a very ill patient?
- Show by demonstration how to turn a patient in bed.
- Show how to lift a patient from one side of the bed to the other.
- Show how (two nurses) to push a patient up in bed. How to pull a patient down in bed.
- Show how to prop a patient with a back rest.
- Show how to change pillows.
- Show how to get a patient from bed into a chair. From chair to bed.
- Show how (two nurses) to lift a patient from bed to stretcher.
- What are the causes of bed sores?
- Give modes of prevention of bed sores.
- Give points in the care of chronic invalids and discuss each.

CHAPTER VIII

ENEMATA. DOUCHES. SPECIMENS

“Make drudgery divine.”

Demonstrations.—Various sorts of enemata. Care of apparatus. Collection and care of specimens. Douches.

An **enema** consists in the introduction of fluid into the intestines by way of the rectum. The plural is *enemata*.

Enemata are given (1) for their purgative action, (2) to relieve flatus (gas), (3) for stimulation, (4) for nutriment, (5) for medication.

Apparatus.—For a purgative enema one needs a fountain bag or irrigating can, an irrigator stand, a clean rectal tip or tube, vaseline for lubricating, and a bed-pan or jar.

For enemata where the quantity given is small, a funnel is attached to the rectal tube, and a pitcher or graduated cup contains the fluid to be given. A fountain bag or irrigator should never be used for a small enema.

Points to be Noted.—In giving an enema the following points should be observed:

The temperature of the solution should be right, neither too hot nor too cold.

The fluid should not flow rapidly enough to cause pain.

The bed-pan should be at hand.

The enema should be made up exactly according to formula.

The nurse should wash her hands thoroughly after giving an enema. The colon bacillus, common in bowel movements, may be carried to other portions of the patient's body or to other patients; if it gets into wounds, an infection of considerable gravity may be caused.

If the patient uses a jar or the toilet after an enema, the nurse should see that his hands are properly cleansed.

An enema should always be given with the patient in a recumbent position.

The Simple Enema.—Prepare 2 quarts of soapsuds, making it fairly strong, using either a cake of soap or the soft jelly made by boiling it in water. Laundry soap is more effective in moving the bowels than white soap, but is more irritating. Have the water at a temperature of about 100°F. or so that it feels comfortable to the hand.

Unless told otherwise, use a fountain syringe or irrigating can with 5 or 7 feet of rubber tubing and a hard rubber rectal tip. Always take a bed-pan with you.

Have the patient lie near the edge of the bed, upon his left side, as the large intestine comes down that side of the abdomen. (When the patient is not allowed to turn, you may give the enema as he lies upon his back, but it is not apt to be as effective.) Cover well, leaving the buttocks easily accessible. Protect the bed under the hips with a towel or bed-pan cover. See that the hard rubber tip is well smeared with clean (not sterile) vaseline or olive oil, open the shut-off cock or snap and let the soapsuds run into the bed-pan till the air is out of the tubing and the solution feels warm. Shut it off, lift the edge of the bedclothing, and gently raising the buttock with one hand insert the tube with the other. The general direction is upward and forward, but the exact angle varies in different individuals. If it does not go in easily, try a slightly different direction. Never force a rectal tube. If you cannot insert it well, try letting the water run slowly; or a patient who is not too ill may do it for himself. Before you turn on the water, be sure that the can or syringe is not hung too high. It should be but a few inches above the patient's buttocks. Steady the rectal tube with one hand and keep the other on the tubing near the shut-off. Remember that the more slowly you give an enema the more effective it

will be. A rapidly given enema produces pain or discomfort and causes the patient to feel that he must expel it before it has gone far enough up into the intestine to dislodge the fecal matter. Five minutes to a pint of solution is not too slow, but at whatever rate it is given it should not be rapid enough to occasion any distress or any great sense of fulness until a reasonable quantity has been taken. The instant that a patient complains of discomfort, pinch the tube with the fingers and stop the flow. Start it again only when the sensations have subsided. By careful and slow administration the patient may take several times the amount which he could otherwise. A quart is usually sufficient, but three pints may be given if there is no inconvenience. Sometimes as little as a pint will be effective.

After giving the required amount, shut off the water and carefully withdraw the tube. Have the patient lie quietly in the same position for five or ten minutes if possible, so that the water may work its way up into the intestine.

If an enema is not effective, it should be reported promptly. A second one is usually ordered, to be given in a half-hour. If the rectum is found packed with hard fecal matter, it should be removed by means of one or two fingers protected with rubber cots, before an enema is attempted.

Enema for Baby.—For a young baby, an enema is given by means of a bulb fitted with a very short and small hard rubber tip. Not much can be given at a time, as it is usually expelled immediately. A soft rubber catheter connected with a funnel may be used, but is more difficult to manage. A douche pan with a towel over it and a small pillow at the end is a convenient bed upon which to place the baby while giving the enema.

High Enema.—For a high enema, use a soft rubber rectal tube or large catheter in place of the hard rubber tip. This tube should not be stiff or it will not conform to the curves of the rectum; nor should it be very soft

as it is liable to double up in the rectum and be useless. It should be well oiled and pushed in gently, the nurse noting whether it seems to be going in properly; push it in about 8 inches if possible; if you attempt to insert it farther than this, it is apt simply to double up. Give a high enema just as slowly as you do a low one.

Opaque Enemata.—Enemata of bismuth subnitrate or barium sulphate are given to render the intestine visible in the taking of an *x*-ray. The following is a good formula: Barium sulphate, 6 ounces; powdered acacia, 3 ounces; buttermilk, to make 2 pints. The mixture should be blood-warm and kept thoroughly stirred. It should be given with the patient in the knee-chest position. Use a rectal tube and funnel; give slowly, taking about fifteen minutes for the administration. It is given just before the patient is sent to the *x*-ray room, and must be retained until after the examination is made.

Enemata for Flatus.—Enemata to expel gas are ordinarily given high and in small quantity. A small funnel is attached to the rectal tube and the solution poured in from a pitcher or measuring cup. The nurse should make every effort to have the quantity ordered taken and retained long enough to be effective.

Enemata for gas are made up according to a formula. Salts and glycerin, soapsuds and turpentine; glycerin and turpentine, turpentine, castor oil and egg, etc., may be ordered. (The latter formula should be well shaken in a warmed bottle till it makes a nice emulsion.) Most of them are mixed with a small quantity of salt solution or soda solution. Milk of asafetida and alum solution are used. Equal parts of milk and molasses are also effective.

After giving an enema for gas, we consider that we have a "result" if a considerable quantity of gas is expelled, even if there be little or no fecal matter with it. If the nurse will examine the abdomen before and after an enema for gas, she can judge of its effectiveness.

Sometimes a small amount (1 ounce) of pure glycerin

is ordered to be given just inside the rectum. For this use a hard rubber piston syringe or a baby's bulb syringe, remembering to rinse it well afterward with hot water.

Rectal Irrigation.—This is given with a two-way tube so that the solution flows out nearly as rapidly as it runs in, cleansing and stimulating. An irrigator is used for this, hung a little higher than for an ordinary enema, connected with the inflow of the two-way tube; the out-flow has attached to it a piece of tubing long enough to reach over the edge of the bed into a jar. In giving the irrigation, if the patient complains of distress, stop the inflowing water till it subsides. Watch the drainage into the jar, and if it does not return freely remove the tube from the rectum and see if it is not blocked by fecal matter. Salt solution is usually used for these irrigations.

Cool Enema.—A cold enema may be ordered in case of hemorrhage from the intestine (as in typhoid), in diarrhea, in dysentery, or to reduce temperature. The water may be of the temperature as it comes from the faucet, or iced if so ordered. It must be given very slowly in order to be retained at all.

Salt Solution by Rectum.—This is given to be retained for its stimulating effect. It needs special apparatus, as the solution must be kept warm for a long time. The reservoir may be wrapped with heavy flannels, or have a heating arrangement around or in it. (A protected electric bulb may be put into the irrigator.)

This method is called the "drop" or "Murphy" method (from its originator). The reservoir must be hung very low, so that the top of the solution will not be above the patient's hips; some sort of a shut-off must be used which will permit only a drop at a time to pass; a screw-clamp of metal or an artery-forcep is usually used. The tube for insertion into the rectum may be a glass douche tip, a hard rubber rectal tip, or a soft rubber tube, as the physician prefers. The solution in the reservoir is made about 120°F. at the beginning. If the tubing is arranged to pass between two hot water

bags, it will help in retaining the heat. The rate at which the solution is given is a quart or less in an hour.

Stimulating Enemata.—Other stimulants, such as coffee, whiskey, etc., are given by rectum. The quantity will be ordered by the physician, and the technic of giving is the same as for nutritive enemata. Coffee used for this purpose should be made very strong and should be perfectly clear.

Oil Enema.—Olive oil to be retained may be given with a rectal tube and funnel. About 5 ounces, slightly warmed, is given at bedtime. It is unirritating and may be retained without much difficulty; it works its way into the colon, softening the fecal matter which may be there, and later produces a natural bowel movement.

Nutritive Enemata.—Rectal feeding is used when for any reason the patient cannot take food by mouth. Stimulants and other medication are also given by rectum, the technic being the same as for a nutritive enema, as the object is the same, to have them retained and absorbed.

The patient for whom the physician orders rectal feeding is invariably a person in a serious condition, and his ability to combat disease will depend largely upon the success of the nurse in giving nourishment and having it retained. It is, by the way, but fair to the patient to explain just what you are doing and why, thus if possible securing his co-operation.

Rather vague orders are sometimes left concerning nutritive enemata, and the nurse must be sure that she is quite clear as to what is to be done. Ask rather than make a mistake or run the risk of not having the enema retained. Remember that rectal nourishment which is unretained or unabsorbed is worse than wasted, as the patient has been deprived of what he very much needed.

A nutritive enema will rarely be retained and will certainly not be absorbed if the rectum contains fecal matter. Be sure therefore to start with a clean rectum, *i.e.* give a thorough cleansing enema. (If one is not

ordered, you may ask if it is to be given. (If one is not usually sufficient for this enema, but it may sometimes need to be given twice.

The following points should be observed in rectal feeding:

(1) To be retained, a nutritive enema should be small in quantity, not over 6 ounces, and with many patients, but 4 ounces.

(2) A nutritive enema should be given into a clean rectum, not sooner than an hour after a cleansing enema or a bowel movement.

(3) It should not be given too frequently, four times in twenty-four hours, or at the most five times, being as much as can be taken care of.

(4) It should be given very slowly and of a temperature as nearly as possible that of the body.

(5) It should be given as high up as a rectal tube can be made to go, so as to get into the colon. The rectum has very little power to absorb.

A rectal or colon tube and funnel should always be used in giving a nutritive enema, the food being poured from a measuring cup or small pitcher, and care taken that not even a teaspoonful is wasted in the apparatus.

A folded towel held against the anus for a little time after the enema will aid in having it retained. It may even be necessary to refuse a request for the bed-pan and insist that the patient try harder to retain what has been given.

Rectal feeding may be used with babies if there is no tendency to diarrhea. The quantity given must be small, it must be given very slowly indeed, and pressure kept at the anus for some time after.

The substances most commonly used for rectal feeding are raw eggs slightly beaten, peptonized milk, and beef juice. Peptonized beef tea, liquid peptonoids, pano-pepton, etc., are also ordered, but the latter two are irritating and hard to retain. Milk is not absorbed unless it has been peptonized. Any food given by

rectum cannot be digested, but only absorbed, so that the only substances which are appropriate are those which have been predigested or which can be taken up by the tissues without change.

Rectal Medication.—Some medicines, notably sedatives, are given by rectum when for any reason it is not advisable to give them by mouth. The dose is usually twice that administered by mouth. The drug must be well dissolved in a small amount of water and given slowly. The rectum must be clean.

Suppositories (conical-shaped pieces of cocoa butter or other material which melts at body temperature, having the desired drug incorporated in them) are commonly used in giving medicine by rectum. They should be inserted well up, past the second (or internal) sphincter muscle.

Care of Enema Apparatus.—Fountain syringes and irrigators which have been used in giving enemata should be washed with hot soapsuds after using, rinsed with hot water, drained, and hung with the snap open and the tubing free from kinks and bends.

Hard and soft rubber rectal tubes should be wiped clean with toilet paper, washed with soap and hot water, boiled, dried, and put away in a clean box or in solution. They need not be boiled before using; in fact it is undesirable to do so, as frequent boiling softens and spoils them.

SPECIMENS

If there is anything unusual about a bowel movement, call the attention of your head nurse to it, or save it for the doctor's inspection. Cover the bed-pan closely with a bit of rubber sheeting and a white cloth, pin on it a paper label with the patient's name, and set it where it will not be disturbed or be in the way. Do not pour it into another vessel.

Always describe a bowel movement on the bedside record. State the color, brown, yellow, grey, black,

green, etc. State the consistency, liquid, semi-solid, soft and unformed, formed, soft-formed, hard, dry, etc. If there is mucus with it, whitish or semi-transparent, sticky or stringy material, state the fact, as it is of importance. Tell the quantity of fecal matter passed, whether very little, a small, moderate, or large amount.

Always make it clear upon the record whether or not the stool is the result of an enema.

Urine specimens are asked for the purpose of chemical or microscopic analysis. The specimen must therefore not contain the slightest particle of any other substance. It must be received and kept in a vessel which is surgically clean, *i.e.*, has been thoroughly washed, boiled, and kept free from dust or other foreign matter. A urinal or basin which has been freshly scrubbed and scalded will do for receiving an ordinary specimen, if it be promptly poured into a sterile bottle. Urine bottles should be closed with a bit of sterile cotton, not with a cork.

When a catheterized specimen is asked for, the end of the catheter may be placed in the mouth of a sterile bottle while the catheterization is being done and the urine allowed to drain directly from the bladder into the bottle.

To obtain a specimen of urine from a boy baby, fasten to the penis with adhesive plaster a small, slim bottle; adjust the diaper carefully so as to hold it in position. With a girl baby, lay her without a diaper on a small bed-pan, putting pillows at the sides to keep her in position; protect the pillows and clothing with small rubber sheets.

The smallest amount of foreign matter in a bottle or basin used for urine may cause a finding in the laboratory which will be the foundation of an incorrect diagnosis.

A specimen of urine should not be smaller than 4 ounces, unless it is impossible to obtain that quantity. Six ounces is better.

Specimens of urine should be labelled with the patient's

name, the date, time of day passed, the whole amount passed, and whether voided or obtained by catheter. Usually the name of the physician is added also.

Twenty-four Hour Specimens.—If a twenty-four hour specimen of urine is asked for, a large bottle must be had to receive it, preferably a gallon size. Start at the time specified with an empty bladder, *i.e.*, have the patient urinate just before that time, and continue saving the urine until the same hour the next day, when the patient should again be required to urinate. If requested, formalin may be put into a specimen to prevent decomposition, but the fact should be stated on the label.

Measuring Urine.—Except for convalescent patients, all urine should be measured. It should not be estimated, as it is difficult to be at all accurate. A receptacle should be kept as a measure for urine, and should be labelled, so that it will be used for nothing else.

Normal Quantity.—The amount of urine passed in twenty-four hours should be about 3 pints (48 ounces, 1500 c.c.). Less than half this quantity, or an ounce an hour, is a danger-signal. One hundred ounces or more in twenty-four hours should be reported, as it may indicate diabetes.

Character of Urine.—Urine should be described upon the bedside notes. It may be clear, cloudy, having sediment, turbid, etc. The color should be stated, straw-color, yellow, amber, brown, etc. Any unusual odor should be noted.

As with fecal matter, any unusual specimen of urine should be saved for inspection.

Disinfection of Excreta.—Urine and bowel movements from typhoid cases should be disinfected before being disposed of. Lime is as good as anything for this purpose, and has the advantage of being inexpensive. (Use the lime employed in building, mixing it with water to make the so-called milk of lime.) It should be well mixed with the discharges, and allowed to stand, closely covered, for at least an hour before emptying. The

nurse's hands should be well scrubbed and disinfected after handling utensils containing excreta from typhoid cases.

In cases of dysentery, either in adults or children, or in any sort of intestinal infection in babies (as the summer diarrheas, cholera infantum, etc.), the greatest possible care should be exercised in handling bed-pans, enema apparatus, or diapers. It is possible to keep an intestinal infection going indefinitely by lack of thoroughness in cleansing the hands after caring for bowel movements; a few germs thus gotten on the hands may be given to the patient in food or drink, by touching cups, feeding bottles, or dish towels. For this reason, some hospitals do not allow a nurse who feeds the babies to change their diapers.

Specimens of Vomitus.—Matter vomited should be described upon the record. The color should be stated, green, brown, yellow, watery, etc. The odor may also be important. The consistency, whether fluid, curdy, mixed with pieces of food or of blood. (Vomited blood is apt to be dark in color or even digested, looking like coffee grounds.) If there is anything unusual about vomited matter, the specimen should be saved, and always in the vessel in which it was collected, as pouring it from one vessel to another may change its apparent character. Such specimens should be kept covered and a paper label pinned on for identification. The frequency of vomiting should be made a note of, whether or not it relieves the patient, whether it is mere regurgitation, accompanied by mild or by violent retching, etc.

Specimens of *gastric juice* are collected at exact times in the day in special stomach cases. The patient swallows a small catheter, holding it in place for the required period of time, until a sufficient amount of gastric juice has dripped into the container. The nurse must see that the procedure is properly carried out and at the exact time ordered.

Sputum Specimens.—These should be delivered to the laboratory in small, wide-mouthed bottles; they should, if possible, be collected in the bottles in which they are

delivered, as transferring them from one receptacle to another is both disagreeable and dangerous.

Specimens of material from the surface of the throat, in suspected diphtheria, tonsillitis, etc., are collected by swabbing the throat with a sterile cotton swab, which is immediately placed in a sterile test tube, tightly closed with a stopper of cotton, labelled and sent to the laboratory.

Blood Specimens.—Specimens of blood are always taken by a doctor, only a slight puncture being made in the finger or the lobe of the ear. The nurse should provide alcohol and small sterile sponges for cleansing the place.

Care of Unsightly Material.—Any basin or receptacle containing a discharge of any sort should be covered while being carried from the room, and if set down for any reason should remain covered.

Basins of soiled solution which have been used in doing a surgical dressing, or jars containing drainage water, should always be covered while being removed from the room or ward.

All soiled dressings, vaginal pads, and all unsightly material from wounds or drainage openings, should be wrapped in paper before being taken from the room or being put into the waste can. Many hospitals provide paper bags for this purpose, but newspapers are always available and should be used freely. If a paper is put into the bottom of a basin which is to be used for soiled dressings, it is much more cleanly and may save scrubbing the basin.

Soiled dressings should *never* be touched with the bare fingers. Every nurse should carry with her a pair of dressing forceps for handling these things.

Vaginal Douches.—Before a nurse gives vaginal douches she should be familiar with the principles of surgical cleanliness, as in many cases the danger of infection from a douche is very real. The douche-point, preferably of glass, should be boiled before using

and should be carried to the bedside without removing from the basin. The douche bag or can should be absolutely clean, and should be kept for the one purpose, not used for giving enemata. Apparatus used in giving douches to infected cases should be kept separate, labelled, and not put again into general use until it has been thoroughly boiled. (The nurse should wear rubber gloves while giving douches to infected cases.)

A cleansing douche should be two quarts in quantity unless otherwise ordered. Its temperature should be 100°F. or comfortably warm to the hand.

Except in obstetrical cases, the douche can should be hung higher than for an enema, usually about two feet above the bed. A towel should be thrown over its top to prevent dust, flies, etc., getting into it.

Giving the Douche.—The solution should first be made ready, put into the can or bag, and carried to the patient's bedside. The boiled douche tip should be in its basin on the bedside table, and the end of the tubing should drop into another basin containing bichloride, carbolic, lysol, or other antiseptic solution and some cotton pledges. The patient, lying on her back, should be placed upon a warmed douche-pan (a folded towel or cloth over the back of it), and each leg covered separately. The chest and abdomen should be covered with a light blanket. If the room is cold, another blanket may be put over in such a manner that it may be pushed aside by the elbow.

The nurse should then scrub her hands thoroughly, spending time upon the finger nails and scrubbing at least half to the elbows. After disinfecting them (the basin of solution into which the tubing from the douche can runs may be used for this purpose), sponge about the vaginal outlet with the pledges which have been prepared. Fit the point into the tubing, turn on the solution, let it run until it is warm and the air is expelled from the tubing, then shut it off. Gently

opening the labia (the folds of skin at the vaginal outlet), with one hand, insert the tube with the other. Turn on the solution and push the tube up as far as it will go easily. While the water is running, move the tube gently round and round, so that every portion of the vagina will be reached and cleansed. Do not let the last of the solution run out, but turn it off when there is still some remaining, as there is some danger of getting air into the uterus. Leave the patient on the pan for a minute or two after the douche is finished, to allow the solution to drain out of the vagina. Dry around the vaginal outlet and under the back and remove the pan.

A patient should not be allowed to take her own douche unless by special order from the doctor. Under no circumstances should a douche be given with the patient in any position but lying on her back; a douche taken sitting over a closet, as is sometimes done, is quite ineffective, as the solution little more than touches the vaginal walls and does not get into the folds of the mucous membrane at all.

Hot douches, given to reduce inflammation, etc., are of a temperature ranging from 105° to 120°F. (Always use a thermometer in preparing these, as the exact temperature is important.) They are large in quantity or long continued. The tube is inserted well up into the vagina, and the can hung low, so that the patient will have the benefit of long-continued heat rather than of force for cleansing.

Douches given to obstetric patients should be hung very low so as to give little or no force to the stream, and should be given with most careful precautions about surgical technic.

REVIEW QUESTIONS

Tell in detail how to give a simple purgative enema.

What should be done in case of a packed rectum?

Tell how to give an enema to a small baby.

Tell how to give a high enema.

Tell how to give an opaque enema.

What points are to be observed in giving an enema for flatus?
Give the technic of a rectal irrigation.

Under what conditions are cold enemata given?

Give the technic of administering salt solution by rectum by the drop method.

What is the purpose of an olive oil enema and how is it given?

Name five points to be observed in the giving of nutritive enemata. What helps in having them retained?

How is rectal medication administered?

Give the care of enema apparatus.

Tell how to save a specimen bowel movement and how to describe it on the record.

How do you collect a specimen of urine for analysis and how should it be labelled?

How do you secure a urine specimen from a baby.

How do you collect a twenty-four hour specimen?

What is the normal amount of urine passed in twenty-four hours?

In what cases should urine be measured?

How do you record and describe urine?

How are urine and bowel movements disinfected?

How do you collect and preserve a specimen of vomitus? A specimen of gastric juice? A specimen of sputum? Of throat secretion?

What is needed for securing a specimen of blood?

Tell in detail how to prepare for and give a vaginal douche.

CHAPTER IX

EXAMINATIONS. WARD DRESSINGS

“Train yourself to think what you would like done if you were in the patient’s place. Think sympathetically for your patient rather than for yourself.”

Demonstrations.—Preparation for chest examination, for abdominal examination, for vaginal examination. Positions for examination. Preparation of dressing tray.

Examination of some portion of the body is a common proceeding in hospitals, and the nurse should know how to prepare for it quickly and assist with it deftly. She should have an idea of the anatomy of each portion of the body and should know in a general way what the doctor is endeavoring to ascertain. Careful watching of examinations will enable a nurse to learn much that is of value to her.

In many cases, simple exposure of the part to be inspected is all that is required. It is the nurse’s duty to see that there is no more exposure than the nature of the case demands, and that both for the sake of comfort and of modesty, other parts of the body are kept covered. Both physician and patient may be careless in these matters, but a nurse is always severely criticised for any laxity. Deft manipulation of covering and clothing adds greatly to a patient’s comfort. Nurses should practise these manipulations until they become expert.

General Examination in Bed.—Screen the bed, if in a ward. Loosen bedding at sides and foot. Fold back spread. Take arms out of nightgown, but leave it in place. Have ready a clean towel and a light blanket

or extra sheet. If the legs are to be examined, turn covers back from the side, not from the top.

Chest Examination.—If the patient is up, the clothing above the waist is removed, including corsets or constricting bands which might interfere with free respiration. The patient is asked to sit upon a stool, so that



FIG. 22.—Listening to the back of a baby's chest.—(From Sanders' "Modern Methods in Nursing.")

both front and back of the chest are easily accessible. A thin towel should be at hand to throw over the chest. If the patient is in bed but able to sit up, he is asked to do so, the nightgown being pulled up to the shoulders, or better still removed. The room should be warm and the patient shielded from drafts.

Examination of the chest is made by *inspection*

(watching the rise and fall of the chest wall, ribs, collar bones, and scapulæ, as the patient breathes); by *percussion* (tapping the chest wall); and by *auscultation* (listening with the stethoscope or the ear against the chest wall). Sometimes the nurse is expected to see that the stethoscope is at hand.



FIG. 23.—Auscultating the chest, showing the arms fixed by the side.—(From Sanders' "Modern Methods in Nursing.")

For the examination of a baby's chest, the nurse may hold the child as shown in Fig. 22 and Fig. 23.

Throat Examination.—There must be a strong light available, a tongue depressor (a spoon handle may be used if nothing else is at hand), and a towel. If an application is to be made to the throat, a metal or wooden applicator (at least six inches long) will be

needed, some bits of clean absorbent cotton, and a small basin for waste. (A metal tongue depressor should be boiled after use.) If the doctor uses a head mirror, the light should be in front of him; if not, it should be behind him.

Abdominal Examination.—Have the patient lie flat upon the back with the knees drawn up to relax the



FIG. 24.—Patient ready for examination of back or chest.

abdominal muscles. See that he lies straight in the bed, not twisted. Be sure that the bladder has been recently emptied. Pull the gown up and fold it smoothly back at about the waist line. Turn all bedding except the sheet back nearly to the knees, and fold the sheet snugly and smoothly across the pubes and groins. Throw a towel over the part exposed until the doctor is ready.

Examination of Lower Limbs.—Fold bed covers up from bottom to about the middle of the thighs. If the knees are to be bent, draw a fold of the sheet down

between the thighs. If the thigh is to be examined, lay a towel up and down over the genitals. Cover the leg which is not being examined.

Pelvic Examinations.—A pelvic examination is a trying thing to most women, and the nurse can do much to make it easier by her own attitude toward it. Be rather matter-of-fact, explain that it is an everyday



FIG. 25.—Patient prepared for examination of lower limbs.

affair, but be careful not to speak of it lightly. Encourage the patient to be sensible about the necessary exposure, but see to it for your own sake and hers, that there is no more exposure than is absolutely needed. Nurses, as they become accustomed to this work, often become careless and lay themselves open to serious criticism.

Vaginal Examination.—For a simple examination in bed, turn back all of the bedding except the sheet. Have the patient lie on her back with knees flexed, separating the legs. The doctor may reach under the side of the

sheet, or may want it draped over each leg. For a more elaborate examination, have the patient lie crosswise on the bed, with the feet on two chairs, and a low pillow under her head. She should have on long stockings or leggings, and there should be a fresh sheet for covering. (Do not attempt to use the bedclothing for this purpose.)



FIG. 26.—Patient prepared for abdominal examination.

She should have urinated recently. The rectum should also be empty, an enema being given if necessary. (A full rectum or bladder not only interferes with the necessary manipulation, but may make an apparent displacement which does not really exist.) See that the external parts are clean, but do not give a douche except by special order; the character and

amount of the vaginal discharge may be an important factor in the making of a diagnosis.

The articles needed are a clean sheet, two clean towels (one under the patient's hips, one for the doctor's hands), cotton sponges, a fresh vaginal pad, and a basin for waste. A speculum, tenaculum forceps, and long uterine dressing forceps may also be asked for. If instruments are used, have them boiled and in warm, not hot, solution, the basin which contains them set where the patient cannot see into it. (Sterile vaseline or green soap may also be asked for.)

Tell the patient to relax as much as possible, so making it easier for herself and for the physician; a series of long, deep breaths will help in this.

Drape the covering sheet exactly and carefully, according to the method used in your hospital. See that it is arranged so that it will stay in position and not slip.

Position for Examination.—A vaginal examination may be made with the patient in the *dorsal* position, as

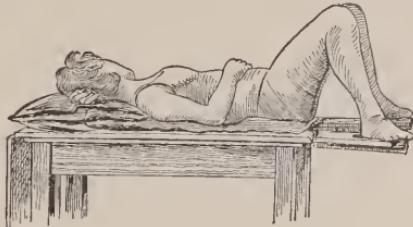


FIG. 27.—Dorsal recumbent posture.—(Ashton.)

above. Or it may be made with her in the *Sims*' position. In this, she lies upon her left side, turning her shoulders so that her face is down and her left arm drawn back under her and thrown out toward her right side; the left leg is bent and the right is well drawn up. Cover her with a sheet, so arranged that it can be pushed back just enough to expose the vulva.

If the *Sims*' speculum is used with the patient either in this position or in the dorsal position, and the nurse

be asked to hold it, she should be sure that she keeps it at the exact angle that the doctor had it; tipping the point back or forth, up or down, makes considerable difference.

Vaginal examinations may be made with the patient *standing*, her right foot placed on the round of a chair or on a low stool. If she is dressed, the outside skirt should be removed; if she is a bed patient, see that she has her slippers, fasten a sheet about her waist so that there will be an opening at the side.



FIG. 28.—Sims' posture, anterior view.—(Penrose.)



FIG. 29.—Sims' posture, posterior view.—(American Illustrated Medical Dictionary.)

Rectal Examination.—Before a rectal examination, the bowel should be emptied by one or more enemata, even though there has been a thorough movement. The object is to have the rectum as clean as it can be made, so that its exact condition can be seen.

The *genu-pectoral* (knee-chest) position is usually used for rectal examinations. The Sims' position is also used. The patient lies upon her face, the knees bent under the abdomen, so that the weight comes on

them and on the chest; this elevates the hips. Use two sheets for covering, so as to have as little exposure as possible. This position is also used in bladder and vaginal examinations and treatments.

A proctoscope (rectal speculum) is usually used, and some clean oil or vaseline will be needed to lubricate it. There should be a supply of small cotton sponges, and a basin for receiving them when soiled. Provide one or



FIG. 30.—Knee-chest or genu-pectoral position.

two rubber finger cots in case a manual examination is desired.

WARD DRESSINGS

The preparation for and assisting with surgical dressings call for great exactness, attention to detail, and good technic. Good work is appreciated by the doctor who does the dressing, and by the patient whose comfort is involved; on the other hand, it is extremely annoying to a busy doctor or a nervous patient to find some important thing forgotten, articles too hot or too cold to use, wrong solution, etc.

It is true that a nurse cannot always know beforehand every item which may be asked for in a dressing, as a

condition may have arisen since the last dressing which requires different treatment, or the surgeon may have decided upon a change in method. The nurse should



FIG. 31.—Dressing stand, with irrigator and solution bowl. Wessen Maternity Hospital, Springfield, Massachusetts.—(*Aikens' Hospital Management*.)

see to it, however, that as far as intelligence and experience can help her, she has ready every article that one could reasonably expect.

Begin long enough beforehand to allow time for proper

preparation; but do not let solutions, sterile instruments, etc., stand for hours, getting cold, rusty or infected. If a doctor arrives unexpectedly, and is unwilling to give you time for sterilization, etc., be as expeditious as possible, and remember that the results of the dressing are his affair and not yours.

A nurse unaccustomed to preparing for dressings will do well to make herself a list of the articles used in each one; it will often save herself and the physician the annoyance of having things forgotten.

In a surgical ward of any size, a dressing carriage is usually provided which is equipped with everything needed in ordinary cases. It is a nurse's duty to keep the carriage clean and in order and furnished with fresh supplies of all sorts. There should be an irrigator, to be filled with whatever solution is needed, a pitcher for fresh, warm solution, a basin of disinfectant for the hands, a tray containing the instruments (more than one set, if possible, to avoid re-sterilizing), a supply of gauze dressings of all sizes, jars containing wide, narrow, and medium packing, gauze and cotton sponges, roller bandages of at least three widths, adhesive plaster in strips of different widths, a jar containing sterile drainage tubing and rubber tissue, some oiled silk or muslin, safety pins of two sizes, balsam of Peru, iodine, alcohol, collodion, etc., sprinkler-top bottles of aristol, bismuth subgallate, talcum, or other dusting powders, boxes of sterile vaseline, zinc oxide ointment, etc., basins or paper bags for receiving soiled dressings, a jar for drainage water, etc.

Articles for Dressings.—Practically every dressing requires tissue or dressing forceps, scissors, a basin of warm solution, a basin or bag for waste, adhesive plaster, cotton or gauze sponges, fresh dressings, clean bandages, and safety pins. In drainage cases, or where there is suppuration going on, one may need a Kelly pad, packing or strips of gauze, solution for irrigating, a probe, an irrigating point, etc.

Prepare solutions and irrigation last, so that they may be of a proper temperature, neither too hot nor too cold.

In doing several dressings, one after the other, time will be saved if there are two nurses. One may go ahead to prepare the patient, adjust the screens about the bed, remove the bandages, place towels about the field of work, etc. The second nurse may assist with the dressing, opening packages of sterile material, handing any article needed, pouring solutions or liquid applications, turning irrigation on or off, disposing of soiled dressings, helping bandage, re-sterilizing instruments, etc.

Assisting with Dressing.—See that the patient is near enough to the edge of the bed to be comfortably reached, and that the solutions and instruments are near. If the doctor is likely to sit during the dressing, provide a straight chair or a stool, not a rocker. Remove rugs from the vicinity, so that they will not become soiled by accidental splashing or anything dropped.

Get the patient into proper position, push heavy bedding back (as described in abdominal examinations), surround the part to be dressed with clean or sterile towels, unpin and remove binder or bandage, leaving the dressings in place till the doctor is ready. When you are asked to remove a dressing, grasp it by the center, not the edge, lift it, turn it over so that the doctor may see any discharge upon it and be able to note the amount and character, and drop it into the waste basin or bag. Do not attempt to hold basins, packages of sponges, or other things, unless it is absolutely necessary, as you are likely to need your hands for other things.

Do not attempt to carry on a conversation with the physician while the dressing is being done. It not only interferes with the efficiency of your work, but may seem to the patient like lack of dignity or indifference. Make your manner toward the patient sympathetic and

interested. If the process is painful, the surgeon must often appear callous to the suffering incurred, but the nurse, while exhibiting sympathy, may at the same time give the patient to understand that she knows the work to be necessary; no word need be said, but looks and manner will convey the feeling.

Learn to open sterile supplies quickly and correctly. Do not take hold of an edge of the wrapping of a package,



FIG. 32.—Private patient ready for dressing.

but grasp it an inch or two back; in this way, there will be no danger of getting your fingers upon sterile things. If the cover of a jar or the stopper of a bottle must be laid down, turn it with the inside up and see that it does not touch anything. Never put your fingers on the edge of a solution basin nor even of a waste basin; put the hands entirely underneath. If you are asked to pour something from a bottle into a wound, take a dry sterile sponge, wet it in solution, and wipe off the mouth

of the bottle before pouring; do not dip your fingers into the basin of solution. When you hand the tubing from an irrigator, take hold of it at least 6 inches from the end, so that the doctor will not have to put his fingers where yours have been.

If stitches are likely to be removed, see that you have a pair of special suture scissors, and that the points are sharp. If they are not provided, ask for them.



FIG. 33.—The right way to handle a basin.—(Aikens' "Home Nurse's Handbook of Practical Nursing.")

As soon as they become dull, which is very quickly, ask that they be resharpened. Explain to the patient that the removal of stitches is not painful, as many persons have an unreasoning fear of the process. Stitches in the perineum are about the only ones that occasion any pain on being removed.

The Carrel-Dakin Treatment of Wounds.—For infected wounds the Carrel-Dakin method is now the accepted

form of treatment.* Several rather small drainage-tubes, closed at the end and perforated at the sides, are inserted into or laid on the wound, their number and location depending on the size and shape of the wound. They are held in place with lightly packed gauze wet in the antiseptic

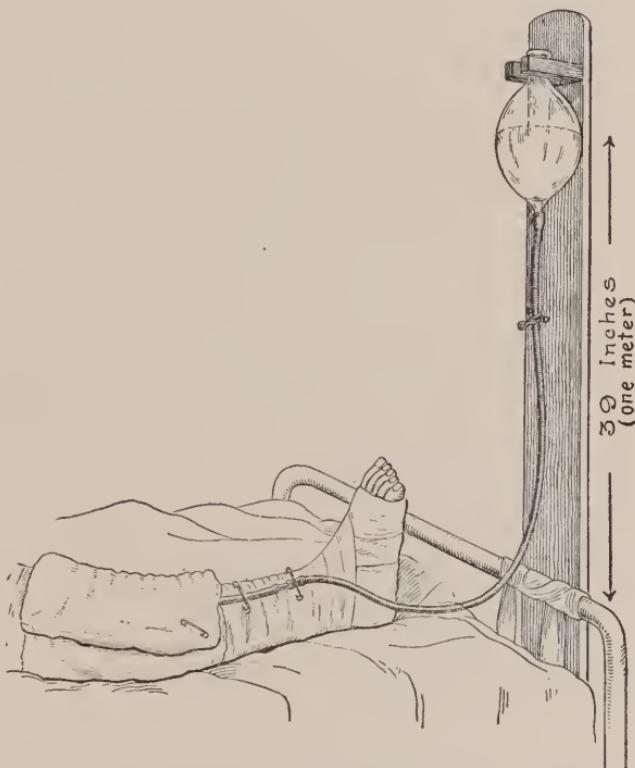


FIG. 34.—Showing Carrel method of irrigating wounds with the Dakin fluid (Keen, modified from Carrel and Dehelly).

tic solution. Over this is placed a thin dressing of gauze and a thick cotton pad. The tubes are connected in sets of two, three, four, or five to a bottle containing the ap-

* The technic given is that of Dr. Joseph A. Blake, of Paris and New York.

properite solution, which is hung at the head of the patient's bed. Every two hours, day and night, the solution in the bottle is turned on for an instant and allowed to flow over and through the wound, thus washing out any discharge that may have accumulated and flushing the wound with fresh antiseptic. The solution employed is usually the so-called Dakin solution (hyposulphite of soda), though other solutions may also be used. Dakin's solution should never be heated, as it is decomposed by a low degree of heat and so rendered inert. Very large cotton pads over the wound and extra protection for the bed and the patient's clothing are needed in these cases.

REVIEW QUESTIONS

How do you prepare a patient for a general examination in bed?

How do you prepare a patient for a chest examination? How is chest examination done?

What articles are needed for a throat examination? Where should the light be held for the physician to use a head mirror?

How do you prepare a patient for an abdominal examination? For an examination of the lower limbs?

How do you prepare a patient for a vaginal examination? What articles should be gotten ready?

Name and describe three positions for pelvic examinations.

In what positions are rectal examinations made?

Give general points on getting ready for surgical dressings.

What articles are needed for an ordinary dressing?

Tell how to prepare a patient for a dressing.

Give points on assisting with a dressing.

Give points on handling sterile supplies.

What is needed for the removal of stitches?

Give the technic of the Carrel-Dakin treatment of wounds.

CHAPTER X

EXTERNAL APPLICATIONS

“The little things that matter so much.”

Demonstrations.—Filling hot water bag and ice bag. Fomentations. Poultices. Mustard plaster. Cold eye-compresses.

Dry Heat.—Heat applied externally is one of the most common methods of relieving pain. It also helps to subdue inflammation in the deeper tissues by increasing the superficial circulation.

Dry heat is ordinarily applied by the use of the rubber hot water bag. Cans are used also, but are better for warming beds, etc., than for direct application to the body. In private practice, one must often substitute a hot brick or stone, a hot plate of heavy porcelain, a bag of salt or sand, a glass bottle or a stone jar filled with hot water; in fact, anything may be used which will hold heat for some length of time.

A hot water bag should not be filled more than two-thirds full, and one should twist or fold the top to expel the air before screwing in the stopper; it will then lie in the desired position. If a glass bottle is used, great care must be taken that it is not too full, and it should not be shaken, as the hot vapor thus formed may cause it to blow out of the cork or even explode.*

* A very careful teacher of nurses uses the following method: Fill the bag a little more than half-full of water. Place the stopper in position and give it two turns with the right hand. Grasp the bag just above the water-line with the right hand, then above that with the left hand, forcing the air out thoroughly. The right hand is now free to screw the stopper tightly in. Wipe around the stopper, turn upside down to test for leaks; lay across back of hand to test for temperature. Put on cover.

Electric heating pads need special care. They must not be allowed to get damp or wet. If the covering of the connecting cord becomes worn through, there is danger of fire or a shock. The heat given off from these pads increases continuously, so that if they have been turned on for a considerable time there is danger of burning.



FIG. 35.—Putting stopper in hot water bottle.—(Aikens' "Home Nurse" Handbook of Practical Nursing.")

Care with Hot Water Bags.—Nurses cannot be too often cautioned about getting hot water bags too hot or leaving them near unconscious or delirious patients or those whose vitality is low. Despite warnings, accidents of this sort are all too common. Each nurse should resolve at the beginning of her career that no patient shall ever be burned by her action or neglect. She should bear in mind also that the presence of any damp-

ness near a hot water bag renders it much more liable to burn. Dreadful burns have occurred where a hot water bag was placed outside a damp flannel, even though the heat was not great enough to have produced the effect otherwise.

The observation of a few simple rules will help in avoiding these distressing occurrences.

Do not fill a hot water bag from the faucet. Use a pitcher, and test the heat of the water with a thermometer. The most careful authorities say that a hot water bag should be made a temperature of only 120° F., 20 degrees higher than that of the body.

Always put a cover on a hot water bag before it goes to a patient.

Never pin a cover on a hot water bag.

Never leave a hot water bag in bed with an unconscious patient. If told to do it, have at least three thicknesses of bedding between it and the patient.

For a delirious, paralyzed, or very feeble patient, do not use a bag which is too hot to be comfortable when laid against your own face.

Do not take a very sick patient's word as to whether a hot water bag is too hot. Investigate for yourself after it has been in place for a little while.

Do not take risks. Be sure.

Moist Heat. Fomentations.—Flannels wrung out of hot water are a convenient method of applying moist heat. The action is slightly different and often more satisfactory than that of dry heat.

If applied at all, fomentations must be kept *hot*. If they are allowed to cool, you are not giving hot applications, but partly cool applications, and are to an extent destroying the effect which you are trying to produce.

Fomentations should be applied as hot as can be borne, but care should be taken that they do not burn. If olive oil or vaseline be rubbed on the skin before applying the fomentation it will be less likely to burn and more comfortable to the patient. The flannel

used should be heavy (a piece of old blanket is best), and should be large enough to make four or more thicknesses over the part to be treated. Do not use cotton material, no matter how heavy, as it does not hold heat.

A heavy towel may be used to wring fomentations or, better still, a *stupé wringer*, made of duck or light canvas with a hem in each end through which a stick is run. The flannel, folded, is placed in the center of the wringer,



FIG. 36.—Wringing fomentation in towel.

and the sticks at each end are twisted in opposite directions until the cloth is wrung so dry that there is no possibility of its dripping. The fomentations should be carried to the bedside in the wringer and should not be taken out till ready to apply. It should be shaken out and tried against the nurse's face or the back of her hand. Spread it smoothly over the part, cover with one or two thicknesses of dry flannel and with a piece

of oiled muslin, rubber cloth, or heavy paper to keep in the heat; over this may be placed a hot water bag filled less than half full, and the whole covered with a heavy bath towel.

If the hot water bag is used, and the patient lies quietly, a fomentation should keep hot for nearly an hour. It should not be removed until another is wrung out and is at hand to apply. The change should be made as quickly and as deftly as possible to avoid chilling.

A fomentation around a limb or joint should be wrapped from the bottom up, the rubber or oiled muslin being spread underneath, the hot, moist flannel upon it, brought up and fastened; if wrapped from above downward, it is sure to drip and wet the bed or clothing.

If the patient tosses about or turns frequently, the fomentation must be bandaged on, the sort of bandage used depending on the part of the body which is being treated.

When fomentations are discontinued, the part should be wiped dry with a bath towel, sponged with cool water, and oil, vaseline, or alcohol applied to contract the pores of the skin and prevent chilling. The flannels used should be washed out with warm soapsuds (made with white soap) and dried, in the sun if possible.

Hot compresses to the eye may be of absorbent cotton. They do not hold heat well, partly because they must be small. A nurse must be in constant attendance, as the compresses need changing every few minutes. A small gas, electric, or alcohol stove should be used to keep the water hot. The compresses are best wrung out with a metal lemon-squeezer. If there is any discharge from the eye, the compress should not be used a second time, but dropped into a paper bag or other receptacle and promptly burned.*

* Some authorities say that hot applications should never be put on the eye.

Turpentine Stupes.—These are more vigorous in their action than fomentations and are used particularly on the chest and abdomen. They may be prepared by wringing flannel out of hot water to which a little turpentine has been added; a teaspoonful to a quart is as strong as most person's skin will bear, and for women and children it must be made weaker than this. Turpentine does not mix with water and there is always danger of a burn from a large drop of turpentine when this method is used. Never sprinkle turpentine on a flannel application.

The best way is to rub the surface to be treated with turpentine mixed with olive oil, about one part turpentine to four of oil, and put over it a fomentation wrung out of plain hot water, changing as often as is necessary to keep them hot and renewing the turpentine every four hours. By this method, there is less danger of burning the skin.

Poultices.—These are less used than formerly. They are usually made with flaxseed (linseed) meal, as it holds heat longer and is more agreeable than other substances. There is no virtue in any particular material.

To make a flaxseed poultice, provide hot water, means of boiling, a saucepan with a handle, and a stiff-handled spoon. The poultice-cloth may be of gauze (two thicknesses), cheese-cloth, or any very thin material. Be sure to have it amply large, so that the edges may be well turned in. Make the poultice too large rather than too small.

Have a sufficient quantity of water boiling in the saucepan, sprinkle into it the linseed meal, stirring meanwhile to prevent lumps and letting it cook gently. When thick enough so that it does not string from the spoon but drops in chunks, it is done. Remove from the fire and beat with the spoon until it is light and a good deal of air is incorporated into it. (A light poultice feels more comfortable and keeps hot longer than a soggy one.) Pour on the spread-out poultice cloth,

which should lie on a board or wooden shelf, never on marble, zinc, or glass, and assuredly not on a varnished surface. Spread the poultice nicely with the spoon, making the corners square, having it not less than half an inch thick. Fold the edge of the cloth in far enough so that there is no danger of the mixture coming out. Roll it up, wrap in a heavy towel, and carry it to the patient. Always try the poultice against your own face before applying it, so that it shall not burn.

If **antiphlogistine** or some similar substance is to be applied, follow directions exactly. Be sure to spread it as thickly as is suggested. The material is usually left on for about twelve hours, when it can be peeled off readily. After removing, the part should be washed with soap and water and rubbed with alcohol.

Mustard is often used instead of heat to bring the blood to the surface and to relieve pain. It may be added to a flaxseed poultice just after removing it from the fire, making the proportion one part mustard to six or eight of the meal. Or mustard plasters or leaves may be used. Mustard leaves come ready prepared; they are spread on cloth, and need only to be wet in warm water before applying; there should be one thickness of gauze put between the leaf and the patient's skin. Musterole, or a cold cream mixed with mustard, is the most modern and pleasant way of applying mustard.

Mustard Plaster.—Mix thoroughly in a bowl one part of mustard and six parts of wheat flour; do not get too large a quantity, as it can be spread very thin and a plaster four by six inches is usually large enough. Wet the mixture with warm water, white of egg, or vinegar, and stir it until it makes a smooth paste. Spread on thin cloth, fold the edges over nicely, cover with another layer of cloth, and it is ready to apply.

Mustard is left on from five to twenty minutes, rarely longer, and removed as soon as the skin is well reddened. Mixed with vinegar, there is no danger of blistering, but ordinarily it should be watched very closely.

Mustard should never be mixed with hot water, as heat causes evaporation of the oil which is its active ingredient.

Tincture of Iodine.—This is one of the commoner *counter-irritants*. It is painted over the skin of the affected area and allowed to dry. The application may be made with a camels-hair brush (which must be washed out afterward) or with an applicator made by twisting a bit of cotton on the end of a tooth-pick. Do not have it too wet, or the iodine will run badly. Paint with smooth, even strokes and do not go over the surface a second time unless ordered. If the application is to be made a second day, make the brush strokes at right angles to the first ones, on the third day diagonally, etc. If the iodine smarts badly, alcohol may be applied to relieve it. There is always danger of blistering a sensitive skin with iodine; for this reason, it is often used half strength.

Liniments.—These are to be applied by rubbing. They usually contain camphor, chloroform, ammonia, etc., some drug which is slightly irritating.

Cold Applications.—These are used for allaying inflammation, reducing temperature, etc. Like hot applications, they must be continuous to be effective. When the ice in a bag has melted, it cannot be considered a cold application.

Ice Bags.—These need more watching than any other application. They cannot be filled very full on account of the weight, and ice melts rapidly when in contact with a surface of as high a temperature as the human body.

The best way to break ice for an ice bag is to use an ice crusher, which grinds it into pieces of an even size with no waste and very little trouble; if such a machine is not available, put the ice into a stout canvas bag and pound it with a hammer or mallet; ordinary cloth will not do, as the ice tears it quickly. Never break ice with a pick in a refrigerator; sooner or later the pick

will go through the zinc lining of the chest and cause a leak. For an ice-bag of moderate size the pieces should be about half the size of an egg. If two bags are being filled at one time, be careful that the covers do not get exchanged; a cover which does not quite fit is apt to leak.

Always put a thin towel or two thicknesses of gauze between an ice-bag and the skin. If the bag goes on the head this is not necessary unless there are bald places or the hair is very thin. Ice-bags should nearly



FIG. 37.—Putting cold compresses on eyes

always be bandaged on or fastened in some way, as they become displaced very readily.

After use, an ice bag should be drained upside down, and packed with toilet paper to absorb any remaining moisture.

Cold Compresses.—If these are to be applied continuously, the nurse must give them her entire attention, as they need to be changed every few minutes if they are to remain cold. The material for them should be thin, so that evaporation may aid in the cooling process.

Cold compresses should be *thin*.

Hot applications should be made *thick*.

Cold cloths for the head should not be more than four thicknesses of gauze or of a very thin handkerchief. They are wrung out of very cold water, dry enough so that they will not drip, and are to be changed every two or three minutes.

Cold compresses for the eye may be of gauze or absorbent cotton; they should be cut neatly, of an oval shape, large enough to cover the eye well but not to extend over the nose or face. A block of ice is laid in a basin, the compresses wetted and laid over it, a good supply being kept. Each compress is lifted with the fingers, squeezed gently to remove any excess of water, and placed over the eye. They should be changed every one and a half or two minutes, or as soon as they become warm.

Cold compresses are used in inflammatory conditions of the eye, where there is pus or some discharge; in these cases, a compress should not be made to do duty a second time, but should upon removal be dropped into a paper bag and promptly burned.

A cold compress for the throat is made of a number of thicknesses of any soft cotton material, wrung pretty dry out of ice water, covered with dry flannel, fastened, and left for some hours or over night. Its action is different from that of the ordinary cold compress.

Dry Heat Apparatus.—In some diseases, notably rheumatism, special apparatus is used for the application of dry heat. A common treatment is baking in an asbestos-lined oven of suitable size and shape. These are made to take in a leg or arm, or even the whole trunk. The heat is supplied ordinarily by a gas flame. The apparatus is simple and safe, but must be watched by the nurse, and applied for the specified length of time.

Electric Light.—The direct rays of electric light are sometimes applied to a painful part. One or more

high-power lamps are fastened in a holder with a reflector back of it to throw the light forward. The light is held near the affected part and directed upon it. It should be moved slowly back and forth so that there will be no danger of burning; if held still, it is almost sure to burn, even though the patient may not be conscious of it. If a low-power light is used, it may be left for some time in one spot, but may scorch clothing or bedding in its vicinity if not carefully watched.

REVIEW QUESTIONS

State some effects of heat applied externally.

Give precautions to be observed in the use of an electric heating pad.

Give the precautions to be observed in the use of hot water bags.

Tell in detail how to prepare and apply fomentations.

Give the management of hot compresses for the eye.

Give the technic of applying turpentine stupes.

Tell in detail how to make a flaxseed poultice.

Give the precautions to be observed in applying and changing poultices.

Tell how to make a mustard plaster.

Tell how to apply tincture of iodine to the skin.

Give points concerning the use and care of ice bags.

Give points concerning the application of cold compresses.

Give the technic of applying cold compresses to the eyes.

How do you prepare and apply a cold compress to the throat?

Give the technic of the application of electric light for the relief of pain.

CHAPTER XI

PULSE. TEMPERATURE. RESPIRATION

"It is constant, intelligent practice that constitutes the difference between the skilled, trained, professional woman and the amateur."

Demonstrations.—Bedside clinics on quality of pulse. Temperature and pulse charts of different diseases. Sphygmograph tracings of different sorts of pulse.

The noting and recording of the "three vital signs" is one of the nurse's commonest and most important duties.

Pulse.—Every beat of the heart sends an impulse, or wave, through all the arteries. Whenever an artery comes near to the surface of the body, this impulse or pulsation may be felt, and is called the pulse. Its force and distinctness may depend upon the size of the artery and its nearness to the surface, but is primarily dependent upon the action of the heart.

The condition of the heart is a valuable guide to the physician, and affords ready and accurate knowledge of the state of the heart.

Normal pulse may vary considerably. A nurse should be able to know whether a given variation is due to a natural cause or to disease.

Taking as the standard 75 beats per minute in the adult man and 80 beats per minute in the adult woman, pulse varies as follows:

(1) *With Age.*—Children have pulses faster than adults. A new born baby's pulse is 120 to 140, that of a child of three years 100, that of a child of ten 90, etc.

Elderly persons have slower pulses, 60 to 65 being common.

(2) *With Position and Exercise.*—Running or rapid walking accelerates the heart-beat, making it temporarily 100 to 130. Active exercise of any sort makes the pulse rapid.

The pulse is five to ten beats per minute higher while standing than while sitting, and five to eight beats less when lying down. Pulse taken in the sitting position is considered the standard, and for this reason a nurse should not allow a patient to stand while having the pulse counted; it would register too high for exact comparison.

(3) *With Emotion.*—Anger or fright increases the pulse rate, as does also mere nervousness. Sudden joy may have the same effect.

If a nurse finds a patient's pulse high without apparent cause, and knows or suspects any reason for it, she should count it again after fifteen minutes and note if there be any difference.

(4) *With Personal Peculiarity.*—Some persons have in health a naturally slow pulse, 50 to 60 per minute; others have a naturally high pulse, 90 to 100.

(5) *With Temperature.*—Pulse rate increases or decreases in proportion to the body temperature, rising or falling about ten beats to a degree of temperature. For example, at normal temperature the pulse may be 70; at 100° , 80 to 90; at 102° , 100 to 110; at 104° , 120 to 130.

(6) *With Disease.*—Diseased conditions influence the ratio between pulse and temperature, so that the normal is not always maintained. It is quite possible to have a high pulse with a normal temperature, or a slow pulse with a high temperature. Such variations are usually serious symptoms.

In adults, an alarmingly slow pulse is 50 or below; an alarmingly high pulse is 120 or above.

It is unusual for a pulse to fall below 50 under any circumstances, but 40 and 45 have been observed.

Pulse rarely goes above 160, but in some conditions,

notably tachycardia (literally, rapid heart) and exophthalmic goitre (Graves' disease), it may go to 200 or more; 240 has been reported.

Very rapid pulses cannot be counted accurately except by means of the stethoscope.

Where to Find the Pulse.—For convenience, pulse is counted at the wrist. It may be counted equally well



FIG. 38.—Counting pulse.

at any point where an artery of sufficient size comes near enough to the surface to be felt distinctly. The carotids in the neck, just inside the sterno-mastoid muscles, are convenient; the temporal arteries, just in front of the ear, are often used by anesthetists; in obstetric cases, one may feel the abdominal aorta while hold-

ing the uterus; with a feeble pulse, one may place the hand over the apex of the heart, an inch below the left nipple.

The Wrist Pulse.—To find the wrist pulse in the radial artery, place the first two fingers (not the third and not the thumb) on the inside surface of the patient's wrist just below the root of the thumb and just over the edge of the tendon which goes to the thumb. Young nurses sometimes feel on the wrong side of the wrist or too near the middle of it. If the pulse is not readily found, slide the fingers a little up or down, as the exact place where the artery comes to the surface varies in different individuals.

See that the patient's hand lies in a comfortable and relaxed position. Do not allow it to be held up, as the exertion increases the pulse rate.

The radial artery is sometimes smaller in one wrist than in the other, making the pulse seem weak; for this reason it is well to compare the pulse in the two wrists before deciding upon the quality.

In fleshy patients, it may be difficult to find the radial artery, or the pulse may seem weak; deep pressure will reveal the true state of affairs.

A baby's pulse is best counted while it is asleep. It may be felt at the wrist or at the temple.

Quality of Pulse.—Quality of pulse is far more important than rate. It takes experience and observation to judge quality, and even after years of pulse taking, one may still find something to learn. A nurse should not permit herself to count a pulse without observing its quality and trying to describe it.

The points to be observed are *force*, *volume*, *tension* and *rhythm*.

Description of Pulse.—Pulse may be described as full, thin; hard, compressible; bounding, weak; wiry, soft; irregular or flickering, regular; vigorous, sluggish; and so on.

Note whether the artery seems full of blood or whether it contains only a small stream.

Note any irregularity in beat. Slight irregularities may be detected by counting in quarter minutes and observing any difference in count. An *irregular* pulse is one which is uneven, where the beats vary in force and length.

Note whether any beats are dropped. This sort of pulse is called *intermittent*.

Note character of each pulsation, whether the rise is sudden or gradual, whether the fall is abrupt or gradual.

Note high or low tension.

Note whether each beat is distinct and clear-cut or whether the beats are inclined to run together.

Watch for a *dicrotic* pulse, a double beat, the second part being of less force than the first.

Much attention is now being paid to patients' blood pressure. It is commonly tested with a sphygmomanometer which is attached to the arm for a few minutes. The nurse should note whether the wrist artery is *compressible*, *i.e.*, can be readily shut off by pressure with the finger, or whether it is very resistant. Either extreme should be reported.

Temperature.—The bodily heat is not dependent upon the temperature of the surrounding air, but remains the same in all seasons and in all climates.

Heat is produced in the body by the oxidation of food substances, a chemical change taking place. Heat is lost chiefly through the skin. In health, the production of heat and its loss balance each other, so that normal temperature varies but slightly, less than a degree, under ordinary circumstances. The taking of food or active exercise increases temperature slightly, while it is a trifle lower during sound sleep. Under the usual conditions of life, temperature is lowest from two to five o'clock in the morning, and highest from eight to ten in the evening.

The normal temperature of the body is $98\frac{1}{2}^{\circ}\text{F}.$, or about 98° in the morning and nearly 99° at night.

Subnormal temperature indicates a lowering of vitality from some cause. A person in apparent health may have a subnormal temperature, but in some way he will be found not quite up to the mark.

Temperature above normal usually indicates some active process of disease going on; the activity or virulence of it is judged by the height of the temperature.

Range of Temperature.—This is only about ten degrees even in diseased conditions, so that a slight variation has considerable meaning. It is generally understood that if the patient has a considerable range of temperature in the course of the day, his condition is more serious than if it were not the case. For example, a temperature which ranges from subnormal to moderate fever is less encouraging than one which persistently runs rather high.

Taking the Temperature.—For convenience, the temperature is taken in the mouth. It may be taken also in the groin, the axilla (armpit), the rectum, or vagina. Axillary or groin temperatures, being of the surface of the body, are a trifle lower than that of the mouth—about two-fifths of a degree. Rectal or vaginal temperatures, being more nearly that of the interior of the body, are a trifle higher—about two-fifths of a degree. For example, normal temperature may be 98.4° by mouth, 98° by axilla, 98.8° by rectum.

The Clinical Thermometer.—The thermometers which are used in the sick room are made so that the mercury will remain at the highest point reached, and must be shaken down before they can be used a second time. The nurse should establish for herself a routine about the matter of shaking down a thermometer, always doing it at the same time, either just before or just after taking the temperature; if she does it sometimes one time and sometimes another, she is likely to make the mistake of taking a temperature with a thermometer which has not been shaken down and so registers incorrectly.

Care of Thermometers.—Thermometers should not be left in the sun nor very near a radiator, stove, or light, as the mercury might be sent higher than the scale of the thermometer and the instrument bursted.

To shake a thermometer down, hold it firmly with two or three fingers and the thumb, the bulb end being free and downward; give it a quick jerk, the motion being made as much as possible from the wrist. Do not let the mercury go too low or into the bulb, as it may be impossible to get it up again.

Thermometers in daily use should be kept in a tumbler or wide-mouthed bottle containing some disinfecting solution. (Bichloride is usually most convenient.) A bit of cotton should be laid in the bottom of the glass and the solution should be three inches or more above it. The too common practice of placing a large wad of cotton in a thermometer glass with barely solution enough to cover the bulbs, is ineffective to say the least.

The thermometer should be washed in *cold*, running water, *before and after* use, and wiped on a clean bit of cotton or a fresh towel. The rule for cleaning and disinfecting a thermometer should be—never offer to a patient a thermometer which you do not think clean enough to put into your own mouth.

Placing the Thermometer.—For a mouth temperature, the thermometer should be placed slanting in the mouth, the bulb under the side of the tongue, rather far back, the end pointing to the opposite side. The patient should keep his mouth tightly closed during the time of taking the temperature; if for any reason he cannot or does not keep the mouth closed, the temperature should be taken by some other method. Be sure that neither a hot drink nor a cold one has been taken within fifteen minutes. Do not take a temperature within an hour after a full meal, as it will be found higher than it would be otherwise. Do not take a temperature by mouth if the patient has been lying with the mouth open.

Do not attempt to take temperature by mouth in young children, in delirious or unconscious persons, in one who coughs much, has difficulty in breathing, or who cannot breathe well with the mouth closed. In such cases, the reading is likely to be incorrect.

A one-minute thermometer should be left in the mouth one and a half or two minutes to be sure of a correct reading.

For taking temperatures in a ward of several beds, two thermometers may be used. Give one to each of two patients and count the pulse and respiration of each while waiting for them to register. Even three thermometers may sometimes be used at one time to advantage.

There are several different ways by which patients who are so inclined may make a thermometer give an incorrect reading, either too high or too low. It is therefore wisest to keep all patients under observation while the thermometer is in position.

Axillary Temperature.—In taking temperature by axilla make certain that the arm and side of the chest are in contact with the bulb or that it is well up into the hollow of the armpit. Pull the clothing down far enough so that it cannot touch the thermometer bulb, and unless the patient is convalescent, keep your hand upon the arm which is to be kept quiet, not in restraint, but simply as a reminder. Leave the thermometer longer than for a mouth temperature, nearly three minutes for a one-minute thermometer. Some authorities suggest drying the axilla before placing the thermometer, but this is not necessary if the arm be kept closely at the side.

Rectal Temperature.—In taking temperature by rectum use by preference a thermometer with a large bulb, of a kind made specially for this purpose; the ordinary bulb is sharp and there is some danger of its doing damage. Anoint the bulb with oil or vaseline, have the patient turn upon his side, lift the bedclothes a

little way, and insert by sight. A convalescent may be allowed to place the thermometer himself.

If you find fecal matter on the thermometer after taking a rectal temperature, the reading is probably incorrect. Remove the feces by having the patient use the bed pan, by giving an enema, or by the finger covered with a rubber cot; then take the temperature again.

For a vaginal temperature, the bulb need not be oiled; it should be placed by opening the labia gently with the fingers.

The time required for taking a rectal or vaginal temperature is the same as for a mouth temperature.

Babies or small children should always have the temperature taken by rectum. The nurse must either hold the thermometer in place or see that the child lies still during the process; the thermometer may slip out or be broken by any sudden movement.

Low Temperature.—Temperature of collapse is given as 95°, but this may indicate simply a low state of vitality. Even if the patient seems in good condition, however, he should be watched when he has an extremely low temperature; hot bottles, hot baths, hot packs, and hot drinks or stimulants are indicated in these cases.

Fever.—A temperature of 100° to 103° is considered a moderate degree of fever. Over 103° is high fever.

Just what happens when the temperature rises or falls is not known. Several theories have been advanced, but none of them can be proven.

In ordinary cases, temperature rarely goes higher than 105°, but it may go to 106° or in children to 107°, and the patient still recover. Temperature sometimes rises very high just before or just after death; this is supposed to be due to chemical changes taking place within the tissues.

In one condition only, sunstroke, does temperature go higher than this, to 109° or over. It is fatal if allowed to continue.

A few authentic cases of very high temperatures, 110°

to 120° , are on record as hysterical or nervous temperatures, but most cases of the sort are open to suspicion of fraud or mistake of some kind.

When temperature goes as low as 96° it is considered alarming, *i.e.*, should be immediately reported.

Alarmingly high temperature is 104° or over.

Some authorities state that a young baby's temperature is slightly above normal, 99° or over; experience will disprove this and show that a temperature over $98\frac{1}{2}^{\circ}$ is accompanied by some disturbance in health.

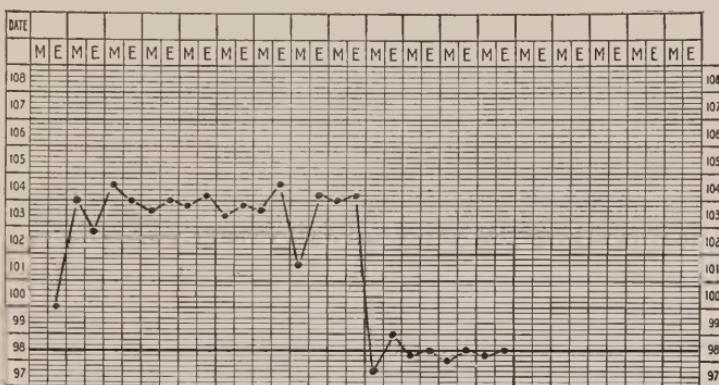


FIG. 39.—Temperature chart of lobar pneumonia.—(Paul.)

Most babies during the first month of their lives have a tendency to subnormal temperature.

Respiration.—A breath, or *respiration*, includes an *inspiration* (filling the lungs with air) and an *expiration* (exhaling or breathing out). This causes the chest wall to rise and fall.

Normal respiration in adults is 18 to 20 breaths per minute. Women breathe about 20 times per minute, men 18. Children breathe more rapidly, old persons slightly slower. New-born infants breathe 30 to 40 times per minute.

Variation in Respiration.—The rate of respiration is increased by emotion, exercise, position, etc., much as

pulse rate is. It is also under the control of the will. In health, respiration and pulse follow each other very closely up and down.

The ratio of respiration to pulse is one breath to four heart-beats.

The ratio of respiration to temperature is one breath to each degree.

Variations from these ratios are apt to be serious. In diseases of the lungs or bronchial tubes and in some heart difficulties the respiration is high in proportion to the pulse and temperature. In brain diseases or injuries, in uremia, and in meningitis the respiration may be very slow.

A respiration as slow as 12 per minute is alarming.

A respiration as high as 40 per minute is alarming.

A respiration of 14 should be reported, and one of 25 or over, if it is a new symptom.

Respiration has been known to go as high as 90 per minute, and as low as 6 per minute. It is not common for it to be lower than 10 per minute or higher than 60.

Counting Respiration.—Respiration should be counted by watching the chest, *never* by putting the hand upon it (unless you are sure that the patient is unconscious). Hardly anyone can breathe regularly and normally when he knows that he is being watched. The best way is, therefore, not to let the patient know that his respiration is being counted. It may be done while you are holding the wrist for the pulse, observing the chest either just before or just after the pulse is counted. See that there is not too much bedclothing over the chest, or at least that it is smooth.

Quality of Respiration.—This is of as much importance as the count and should always be noted.

Respiration may be deep or shallow; regular or irregular, smooth or intermittent, noisy or quiet, easy or difficult. Difficult breathing is termed *dyspnea*. It may be wheezy, moaning, rattling, sighing, etc. It may be visible at the upper part of the chest or at the

lower, or it may be abdominal. Men and children usually breathe abdominally, women with the upper part of the chest.

Cheyne-Stokes respiration is characteristic, and is considered a forerunner of death. It may be normal in count, but begins with very shallow and quiet breaths, becoming gradually deeper and noisy, subsiding, then rising again. The cycle is completed in one or two minutes. It is not a common thing, but the nurse should be able to recognize it when it occurs.

Pulse and respiration should sometimes be counted more frequently than ordered.

In heart cases, the nurse should feel the pulse nearly every time she comes to the patient's bedside, every hour at least.

In freshly operated cases, the pulse should be counted every five minutes until consciousness is regained. This rule should also apply to obstetric cases which have had an anesthetic.

In brain cases, the respiration should be carefully watched.

In new-born babies the breathing should be observed every fifteen minutes for the first few hours.

Never take a temperature without counting both pulse and respiration.

Remember that every diseased condition has its characteristic pulse and respiration, and try to learn something of them as soon as may be.

REVIEW QUESTIONS

How is pulse produced? What is normal pulse?

Name the conditions which influence pulse rate and discuss each.

What is the rate of a baby's pulse? A child's?

What is alarmingly high pulse? Alarmingly low?

How high may pulse go? How low?

Where do you find and how count the pulse?

Give points concerning quality of pulse. Give terms used to describe pulse.

What is an irregular pulse? An intermittent?

How is blood pressure taken?

What causes the bodily heat? Does it vary with climate or season?

What is normal temperature? What is the importance of range in temperature?

In what ways may temperature be taken?

Give points concerning the care of thermometers.

Tell points to be observed in taking a mouth temperature.

Give points concerning the taking of temperatures in a ward.

Give points on taking temperature by axilla.

How is rectal temperature taken? Vaginal?

What does subnormal temperature indicate?

What temperature is considered fever?

What is dangerously high temperature? How high may temperature go? What is a hysterical temperature?

What is alarmingly low temperature?

What is respiration? What is normal respiration?

What causes variation in respiration?

What is the ratio of respiration to pulse? To temperature?

To what are variations in these ratios due?

What is dangerously high respiration? Dangerously low?

How high may respiration go? How low?

How should respiration be counted? What terms are used to describe quality of respiration?

What is dyspnea? What is Cheyne-Stokes respiration?

Give special points in taking pulse and respiration.

CHAPTER XII

KEEPING RECORDS. PRINTING

"The hospital is the nurse's workshop."

Demonstrations.—Exhibition of temperature and pulse charts of various diseases. Baby's weight charts. Typical bedside notes. Practice in printing.

With the first work which a nurse does for a patient begins her keeping of records. These bedside records, so-called, are valuable for the following reasons:

To the nurse.

To serve as a memorandum of what she has done and at what time.

To the physician.

To show what has been done throughout the case.

To show what the patient's condition has been.

To refer to weeks, months, or years later, when he wishes to look up the details of a case.

To the hospital.

As a record of work done in each individual case.

To be produced, if need be, as evidence in court in case of suit concerning the patient or treatment given.

What to Record.—The young nurse finds it difficult to know what to record and what to omit. She may be told "Put down everything you do," only to find that the greater part of her work, bed-making, back-rubbing, tidying up, and other things which take hours of time are not to be recorded, but are assumed. The rule is: Put on record *everything that you would tell the doctor, head nurse, or nurse who relieves you.* This rule should be unvarying.

Nurses err in recording too little rather than too much, and the record so far loses its value. It is not uncommon to look over a patient's record and yet be unable to

tell whether he slept well, whether or not a physician saw him, what sort of food was served him, whether or not he ate it, whether or not he was suffering, when a wound was dressed, and many other matters which might have an important bearing on his case. A record should be so complete that *no explanation is needed*.

The following case may serve as an ideal. The physician was a stranger to the nurse, and she did not know what points he wished emphasized. She recorded all that she would have told him, or that she fancied any physician might ask. When he came for his daily visit, he exchanged greetings with her and the patient, took the record, found the note of his last visit, and read carefully from that point on. At the end of the reading, there was almost nothing for him to ask either of patient or of nurse; yet the entire record for twenty-hours did not occupy more than fifteen lines.

Neatness.—This is of prime importance in the keeping of a record. Several nurses may record items on the same sheet and each should see to it that her part is not the occasion for criticism. One may not be able to write beautifully, but one can always do it neatly. Use all the space needed to make the record clear. Do not put on the same line things which occurred or were done at different times; on the other hand, do not skip lines.

Exactness.—Be sure that the heading of each sheet is filled out, at least with the patient's name, the physician's name, the nurse's name, and the date. Remember that one leaf of the record may become displaced or lost and that without the heading no one will know where it belongs. See that names are spelled correctly, and that they are given fully enough to identify the patients. "Mrs. Smith" is insufficient, but "Mrs. E. Smith" will serve for identification.

Always record the hour, and whether it is A. M. or P. M. Some hospitals have the night record put in red ink in order that it may be the more easily distinguished.

If there is a doubt about a thing which you record,

place a question mark after it. Thus, a pulse recorded "140(?)” means that the nurse was not sure of the exact count.

If a remark concerning any item can be put into the column with the item it will be more readily seen.

Record temperature in tenths, writing it either as a decimal (98.6), or as a small figure a little above the line (98⁶).

Never record pulse and temperature taken at the regular hour without the respiration.

Use full names in recording medicines rather than abbreviations. *Bis.* should not be written when Bismuth subnitrate is meant; nor should *Cod.* be recorded when Cod. sulph. or Cod. phos. was given. Remember that your record may at any time be called into question, and that the statements on it should be as exact as you can make them.

Always record the dose of medicine given. You might be liable to accusation of having made a mistake if this is not done.

Latin and English.—In all instances, especially in recording medicines, use all Latin or all English names. Do not write Mag. sulph. one day and Epsom salts the next. Do not mix Latin and English, as oil and Ricini; it is either Ol. Ricini, or castor oil.

Record the amount of sleep if possible, and note whether it was sound and quiet or broken and disturbed.

Excreta.—In an acute case record the amount of urine and in a convalescent if there is anything unusual about it. Be sure whether or not a patient urinated at the time of a bowel movement. Failure in this respect has been responsible for serious illness which might have been forestalled and prevented. A patient may suddenly secrete very little urine, though he urinated frequently enough; the physician might suppose from the chart that the quantity was normal, when the amount passed in twenty-four hours was dangerously small. Note color of urine if it is unusual.

Always describe a bowel movement, and make clear whether or not it was the result of an enema.

Results of Enemata.—If flatus was expelled, note it. If there was no bowel movement, state the fact. If an enema was retained, make a note to that effect. The nurse should be clear in her own mind as to what sort of result was to be expected from an enema, whether it was given to produce a bowel movement or to relieve flatus.

Record all surgical dressings and tell who did them. If clean dressings are put on by the nurse, state the fact.

Menstruation should be noted upon the record. The simple statement "menstruating," and later "menses ceased" are sufficient in ordinary cases.

Record all visits of the attending physician.

Nourishment.—In all acute cases record *what the patient ate*. Do not put down the amount served, but the amount actually eaten. Do not record a meal as "breakfast, dinner," etc. Either say only "full diet," "reg. diet," etc., at the top of the column, or specify the items. An itemized statement of each meal is always in order, but one may not have time to write it, or (as in the case of a convalescent) the matter is not considered important.

Operations and Births.—The time at which the patient went to the operating room should be noted, also the time of returning.

In obstetric cases, the time of the birth should be recorded and note made stating the sex of the child. "Child born, boy (or girl)," or "Delivered of a boy (or girl)."

Separate records should be kept for mother and baby.

Do not use ditto marks.

Remarks.—Make it a matter of pride to keep the remarks column well filled. Few remarks suggest a careless, lazy, or unobservant nurse, while well-chosen observations concerning the patient's condition show at least that she was interested in her work. Things

which she might consider minor matters may prove to be of great importance, and would not be known did she not observe and record them.

Under remarks should be placed all such items as appetite, pain, nausea, chills, perspiration, condition of skin, condition of tongue, delirium, condition of mind (whether cheerful or depressed), restlessness, etc., and any items for which there is no room in other columns.

Temperature Charts.—It is customary to keep temperature charts for all acute cases. These are made in

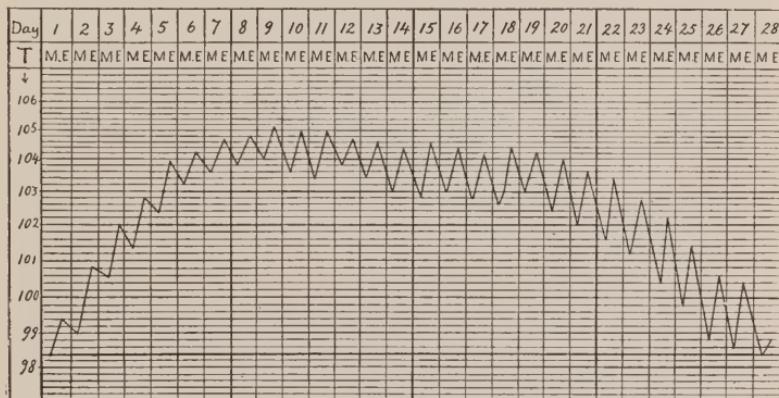


FIG. 40.—Temperature-curve in a typical case of typhoid fever.—(*Register.*)

various forms; they usually include record of pulse and respiration as well. There may be a separate portion of the sheet for each, or pulse and temperature may be put together and respiration noted in figures at the bottom.

These charts are valuable, since they give a graphic presentation of the pulse and temperature far better than it can be done by written figures. Often some fine point in the case is discovered by their means which would otherwise have been overlooked.

Each hospital has its own method of keeping these

charts. It is best learned by watching another nurse work at them.

Weight Charts.—These are kept for babies, and are similar in appearance to temperature charts; they are kept upon the same principle, the line indicating whether the child's weight is increasing or diminishing. A dot and a short line each day includes all the work required to keep them. They are interesting and satisfactory both to doctor and nurse.

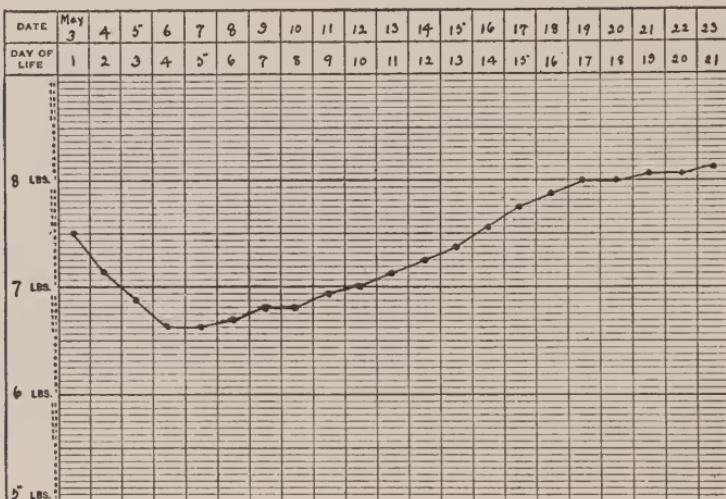


FIG. 41.—Baby's weight chart.

Erasures.—*No erasures* should be made upon a bedside record or chart of any sort. If a mistake is made, draw a line through the word or words and make the correction below, or copy the entire sheet. An erasure might be construed as an attempt to falsify, and a record which shows one is not accepted in a court of law.

PRINTING

Charts and bedside records should be not only neat but very plain. Illegible writing is most exasperating

to a busy doctor and often furnishes him with an excuse for not reading the record at all.

The best hospitals do not permit their records to be written, but insist upon their being printed. The advantages of printed records are their neatness, legibility, and uniformity.

The printing of hospital records must be done in a style which is clear and which can be rapidly set down. Not an unnecessary stroke should be made, but each letter should be perfectly legible by itself and in combination.

Printing can be done more rapidly if straight lines are used as far as possible and few curves made. Straight lines in printing also give more character and style.

Back-hand printing covers any defects better than that which is straight up-and-down or has a forward slant.

Beginners need to remember to place the letters of words very close together and the words themselves well apart. Inattention to these matters often makes printing difficult to read.

The following details will be of service to those who have not been taught to print:

Make capital letters at least twice as high as the small letters, two or three "spaces."

Capital letters should always come entirely above the line, never extending below.

Of the small letters, b, d, f, h, k, l, and t are made two spaces high, above the line. F, g, j, p, q, and y extend one space below the line.

Do not use a curve when a straight line will do. Do not make unnecessary strokes.

If you wish to make the printing a trifle more ornate, the ends of some of the letters may be extended by simply letting the pen go at the end of a stroke, thus:



FIG. 42.

Do not practise with a pencil. Always use pen and ink.

The Small Letters

- a make as round as you can, the second stroke a straight line.
- b a straight line with a circle attached low down.
- c as nice a curve as can be made, shading it at the top, letting the lower end rest upon the line not curving upward.
- d a straight line attached to a circle like a reversed b.
- e a c with a cross-bar; make the bar slanting and the letter will have more character to it.
- f a straight line extending below the writing line with a hook at the top and the cross piece about half-way down.
- g make a circle set slightly above the line; attach an s-curve to extend below.
- h a straight line; attach a rather blunt angle.
- i a straight line with a dot; do not omit the dot.
- j a straight line extending one space below the writing line ending with a hook; to be dotted.
- k three straight lines, each made with a definite stroke; attach the last stroke about one-third of the way out if you wish to get a clear letter.
- l a straight line two spaces high.
- m a straight line with two blunt angles attached well up toward the top.
- n a straight line with a blunt angle attached. (Do not let the first stroke run above the rest of the letter or it will be mistaken for an h.)
- o as nice a circle as you can make; begin at the top.
- p like b and d, remembering that the circle sets upon the writing line, the straight stroke extending below.
- q a reversed p.
- r a straight line with a small acute angle attached near the top; the last stroke may be made heavier.
- s a double curve ending in a straight line; the upper curve should be smaller than the lower.
- t a straight line two spaces high ending in a hook; the cross-bar is about one-third of the way down.
- v a curve with straight ends of equal length.
- w an acute angle; the second stroke may be the longer.
- w w a duplicated v or u; the last stroke may be the longer.
- x one straight line crossing another, one space high.
- y a short straight line and a long one joined at an acute angle; the angle should come on the writing line.
- z three straight lines joined.

a, e, g, r, and s are the most difficult letters to make and need practice.

The Capital Letters

- A make the top square not pointed; put the cross-piece only about one-third the way up.
- B let the ends of the curves project; the upper curve should be the smaller.
- C like the small c, emphasizing the shading at the top.
- D let the ends of the curve project.
- E straight lines; put the center bar a trifle high.
- F same as the E without the lower stroke.
- G like C with two strokes added; the last stroke may come below the line.
- H straight lines; the second vertical line may be higher than the first; put the cross-bar a trifle high.
- I a straight line made heavy; it may be shaded at the lower end; it should be set exactly on the line.
- J a straight line with a hook or an angle at the lower end.
- K like a small k except that the top strokes come to the same height.
- L an angle, the lower stroke heavier and on the writing line.
- M like a small m, two spaces high.
- M two straight lines and an angle; do not have center come too far down.
- N like small n.
- N three straight lines; second line joins the third above the writing line.
- O a slightly flattened circle, beginning at the top.
- P much like a capital D.
- Q O with a short curve on the line leading to the right.
- R P with the addition of a straight line; start this last stroke well away from the upright one.
- S same as small s, making the lower part larger than the upper; the ends may be shaded.
- T make the upper stroke amply long.
- U, V, W, X, Z, same as the small letters, but two spaces high.
- Y three strokes; whole letter above line.
- C, G, J, L, S, U and Y are especially difficult, and should be practised.

REVIEW QUESTIONS

Why are bedside records kept? Temperature charts?

What should be recorded upon bedside notes?

Discuss the importance of exactness in recording.

Give points concerning the recording of medicine, sleep, stools, urine, and food.

What things should be included in remarks?

Why should erasures not be made in records?

What is the value of a baby's weight chart?

Give general points on printing.

CHAPTER XIII

MEDICINES

"The knowledge which one gains by working among drugs cannot very well be classified, because it is dependent upon daily occurrences. Such service requires constant vigilance. Accuracy first, rapidity second."

Demonstrations.—Methods of giving medicine, pills, powders, oils, etc. Giving of hypodermic injections. Care of hypodermic syringes. Bedside clinics upon effect of drugs.

The giving of medicines and their care are among the nurse's most important duties. The work involves responsibility and a mistake may have serious consequences.

Medicine Cases.—All hospitals insist upon a medicine case, and most of them have medicine rooms, some separate place where drugs may be kept locked, or if this is not practicable, where they are out of sight and reach of patients. Sick people are irresponsible, and there is never a time in a hospital when some patient might not, if opportunity offered, either out of curiosity or by deliberate intent, help himself to an injurious drug.

Medicines should not be kept in the patient's room. The practice of doing so may be convenient for the nurse, but is a dangerous one. Bottles and boxes of medicine make the room appear untidy, and constantly remind the patient and his visitors of illness.

Medicines should be kept in a cool place, as most drugs deteriorate with heat. If the medicine room is warm, the window may be left open a little way; this will also help to do away with the "druggy" odor.

Bottles and Corks.—Glass stoppered bottles are the best, but if corks are used they should be kept clean and

fresh and put into the bottles tightly. Sticky liquids, acids, ammonia, etc., need new corks often. Dusting should include the mouth of the bottle as well as the cork or stopper.

Re-labelling.—A young nurse should never take the responsibility of re-labelling medicine bottles. It seems a simple thing to do, but even with the greatest care a mistake may occur. Many hospitals permit it to be done only by the druggist. If there is occasion for putting fresh labels on solution bottles, they should be done one at a time, never wholesale; it is safer to leave this work to the head nurse.

Medicine and solution bottles should be wiped daily with a damp cloth; any streaks or smears should be washed off at the time they occur. The corks of all solution and alcohol bottles should be tied on so that they will not be lost.

Pouring Medicines.—Liquid medicines should be poured from the side of the bottle which is not labelled; this prevents smearing and blurring of the label. Oils may be poured by twisting the bottle as you finish, giving it a half turn, so that the oil will run back into the bottle, not down the side.

Always shake a bottle of liquid medicine before pouring out a dose.

When measuring out liquids, always hold the glass on a level with the eye, or the dose may be inaccurate.

Replace the cork of a medicine bottle as soon as you have finished pouring.

Dropping Medicine.—To drop a liquid from a bottle, wet the cork with it and hold just below the edge of the bottle; as the liquid is dropped on it, the fall of each drop is broken, making counting easier and the process more exact.

When a certain number of drops are ordered, find out whether the drug is to be dropped from the mouth of the bottle or from a medicine dropper. There is a marked difference in the size of the drops formed by

these two methods and a mistake would result in too large or too small a dose.

Giving Pills.—Pills, tablets, and capsules should not be poured into the hand for counting, nor should a nurse ever touch a pill with her fingers. Always use a spoon. A pill may be got out of a bottle by rolling it gently from side to side as it is tipped. Take the pill to the patient in the spoon and give it from the spoon.

Getting Out Medicines.—*Always look at the label of a medicine bottle twice before giving the dose*, before you pour it out and afterward. No matter how familiar with drugs you may become, it is never safe to disregard this rule.

Never speak to anyone nor listen to conversation while you are measuring medicines; there is danger of making a serious mistake.

Never use any medicine or drug which is not labelled.

Always shake a bottle of liquid medicine before pouring it.

Never let one patient carry medicine to another.

A medicine tray for a private patient should have a doily or napkin on it, a glass of water set on a small plate, and the medicine in a small glass if it be a liquid or in a spoon if it be a pill, tablet, or capsule; if it be a powder, it should remain in its paper until you are ready to give it.

Medicines for wards are usually gotten on a large tray, each dose being labelled with a card containing the patient's name or number. Before carrying the medicines to the beds, see that each patient has a glass of water available for taking them.

How to Give Medicines.—The nurse should be able to tell her patients how to take their medicines with the least discomfort. Patients who have been ill for some time will have their own methods, but many will be dependent upon their nurse to show them the best way.

Pills or capsules are more easily swallowed if placed at the back of the tongue and washed down with a liberal amount of water. Or a mouthful of water may be taken

first, the pill slipped between the teeth, and as it were floated down.

A dry powder is best given in a dessertspoonful of water, care being taken to wet every part of the powder before giving. Some powders, as aspirin, trional, etc., are very disagreeable if taken into the mouth dry, causing choking. A few of the heavy powders, like bismuth, may be given dry on the tongue and washed down with a swallow of water.

Liquid medicines of disagreeable taste should be given with very little dilution, but followed with the requisite quantity of water. For example, Epsom salts should be given dissolved in a small quantity of water, but should be followed by a glassful. Bread, sugar, or orange removes an unpleasant taste from the mouth better than water; one of these should be brought in on the tray to be given after a nauseous dose.

Very bitter medicines, as nux vomica, cascara, etc., will not taste so badly if the patient will close the mouth so tightly that no air can enter for a few minutes after taking the dose.

For unconscious or delirious patients, have the quantity of medicine as small as possible, and preferably liquid; use a small spoon and place the medicine as far back in the mouth as possible.

Giving Medicine to Children.—Children find it very difficult to swallow pills or capsules. Try putting the dose into a spoonful of jelly or a bit of bread. If this does not help, ask if you may dissolve the pill or if liquid medicine can be substituted. Children take unpleasant doses quite readily if they are in such a form as to be easily swallowed; a liberal piece of orange after them will usually be an inducement to try.

Giving Castor Oil.—Castor oil, the bugbear of the average patient, may be given in many ways, in coffee, in beer foam, in whiskey or brandy, etc. The most satisfactory methods are those which conceal its oily character; the following has been used with success:

Make a small quantity of strong lemonade, put the oil into it, set the glass on a plate, and when at the bedside, stir in one-fourth of a teaspoonful of baking soda; this will cause effervescence, and if the mixture is drunk while still foaming, no unpleasant or oily taste can be detected. Babies and small children usually take castor oil best without any attempt at disguise, directly from the spoon.

If a liquid medicine and a pill are to be given at the same time, give the pill first unless the patient prefers it otherwise.

When patients have peculiarities as to how they wish to take their medicines, respect and try to remember them.

Hypodermic Injections.—Medicines may be given hypodermatically (by injection under the skin—subcutaneously) when it is impossible or unwise to give them by mouth or when rapid action is desired. This method is commonly employed in case of shock, in extreme pain, or when the stomach is disordered.

Most of the drugs given hypodermatically are powerful and the doses must be accurate and the effects closely watched. These drugs are supplied in the form of tablets which are readily soluble and which give an accurate dosage. The nurse should be sure that she does not make mistakes in fractions in estimating doses to be given by hypodermic, as in thinking that two-thirtieths make a sixtieth instead of a fifteenth, two-fifths, a tenth instead of four-tenths, etc. A few of the drugs given by hypodermic are liquids, notably adrenalin, ergot, and camphorated oil.

How to Prepare a Hypodermic Injection.—Strict precautions must be taken about surgical cleanliness, since if either skin, syringe, or solution be not thoroughly aseptic, an abscess may result. (Some drugs, as ergot, whiskey, etc., are irritating at best; they are given deep into the tissues.) Wash the hands before beginning to prepare a hypodermic. Be sure that the syringe is per-

fectly clean. If one made entirely of glass is available, it may be boiled; if boiling is not practicable, draw up into the syringe some 5 per cent. carbolic solution then some hot sterile water. Place the needle in a spoonful of water and boil over an alcohol or gas flame. The needle may be removed from the spoon, handling it by the end which screws on the syringe, and laid upon a sterile sponge or set on the table with the point up. About ten minims of the water in the spoon is drawn up into the syringe and the rest emptied out. The drug to be given is placed in the spoon, and the water from the syringe added to it; a gentle shaking or heating will cause the tablet to dissolve. The solution should be perfectly clear, as any particles are likely to block the needle. Screw the needle on; hold the syringe with the needle pointing upward, push the piston slowly until all the air is expelled. Wrap the needle in a sterile sponge while it is being taken to the patient.

Giving the Hypodermic.—The places chosen for giving a hypodermic injection are the outer fleshy portions of the arm, leg, or back, any location being correct where there is no danger of the needle striking a bone or a large blood-vessel.

Cleanse the skin by scrubbing with alcohol and a sterile sponge. Grasp a portion of muscle with the fingers of the left hand, pinching it slightly so as to make a firm place for the insertion of the needle. Push the needle in with a quick movement, preferably at an angle, and preferably pointing toward the trunk. Inject slowly and gently and be sure that you empty the syringe. After withdrawing the needle, rub the surface of the skin with a sterile sponge and if necessary continue to massage it for a minute to promote absorption. If the patient is in poor condition, or the circulation is sluggish, it may take some time for the dose to be absorbed.

Always tell a patient who is conscious that you are going to give a hypodermic. If the patient has not had one given before, explain that it will feel like a pin prick.

Do not give a hypodermic to a delirious patient without someone to hold her, or a serious accident may occur.

Care of Hypodermic Syringe.—The syringe, needle and all, should be cleansed by drawing up into it sterile water and afterward alcohol which acts both as disinfectant and drier. The needle should have a wire kept in it to prevent its becoming stopped. Both needle and syringe should be put away in a clean, covered receptacle.

Effects of Medicine.—Too much care cannot be exercised in the giving of medicines and in watching for their effects.

Do not give a medicine without a written order. If a verbal order is given you, hand the doctor the order book and ask him to write it. This exonerates him from blame if a nurse makes a mistake, and at the same time renders her less liable to error.

A nurse ought not to give any drug without knowing what it is and the size of the dose which she is giving. Some doctors, however, leave pills or tablets unlabelled with the instruction to give one once in so often, and if questioned as to the nature of the medicine say, "it does not matter." The young nurse must leave such a situation to be dealt with by her head nurse, and simply do as she is told; but her work cannot be as intelligent or as truly helpful to the physician as if she knew what she were giving and what effect was to be expected from it.

Most doctors expect nurses to know whether the doses which they are giving are large or small, and trust them to watch for and report effect or non-effect. To this end, the nurse should know about drugs as soon as possible, and she should never lose an opportunity to learn all she can by observation.

In general, where much medicine is being given, impairment of digestion should be watched for and if it can be traced to any particular drug, the physician's attention should be called to it.

When stimulants are being given, watch for changes in the pulse and note any difference from day to day.

Very important changes may take place, and the nurse should be able to detect them as soon as the physician does.

When giving large or long-continued doses of strychnia or digitalis, look up the symptoms of poisoning by these drugs; remember that they accumulate in the system; note and report any suspicious symptoms, such as throbbing pulse and disordered stomach with digitalis, and twitching or jerking with strychnia.

Remember the drugs which produce ringing or buzzing in the ears or impairment of hearing, as quinine and the salicylates. If these symptoms occur, report them.

Remember the drugs which produce rashes, as the bromides, the iodides, quinine, turpentine, morphine, arsenic, belladonna, etc., and if any appear, call the doctor's attention to them. All persons are not alike sensitive to these things, and small doses may produce in one person an effect for which another would require a very large dose.

Nurses Taking Drugs.—Avoid the habit of taking a drug for any little ailment which you may have. The practice is an infinitely dangerous one, and no one is safe who allows herself to begin it. Make it a strict rule never to prescribe for yourself, even in the simplest disorders. Go to your head nurse.

In regard to taking drugs which relieve pain, the rule which is universally accepted is the only safe or honorable one. *Never administer to yourself any pain-dispelling drug.* If you have need of such relief, someone else should prescribe, measure out, and give it to you.

REVIEW QUESTIONS

- Where should medicines be kept, and why?
- Who should re-label medicine bottles and why?
- How should liquid medicines be poured from the bottle?
- How do you pour oils?
- How do you drop medicine from a bottle?
- How do you get a pill out of a bottle without touching it with the fingers?

How may you avoid mistakes in giving medicines?
How may pills or capsules be easily swallowed?
How are powders best given?
What will remove the taste of disagreeable drugs?
How may medicine be given to an unconscious or delirious patient?
How may you help a child to swallow a pill?
State methods of giving castor oil.
Tell in detail how to prepare and give a hypodermic injection.
Should medicine be given upon verbal order? Why or why not?
What should a nurse know of drugs, and why?
What are the rules for the nurse herself in taking drugs?

CHAPTER XIV

OBSERVATION OF SYMPTOMS

“The ability to recognize symptoms comes only by practice coupled with intelligence.”

Bedside clinics should be given in connection with this chapter, with attention to as many as possible of the points mentioned.

Importance of Observation.—Too much emphasis cannot be put upon cultivating the power of observation. The nurse must be in this the physician's right-hand man, and he should be able to depend upon her absolutely. The physician spends but a few minutes with the patient where the nurse spends hours. Most patients brighten up during the doctor's visit, and appear better than they are; while a few deliberately or unconsciously assume a woeful appearance which may be misleading. At the best, the doctor must often make a snap judgment, while the nurse is in a position to know conditions more accurately.

Reasons.—A doctor comes but once or twice a day, and in the interim, important changes may occur, which if the nurse is not observant, may lead to serious results. The following case may be cited as an example; the second night after operation a nurse catheterized the patient and got but 2 ounces of urine. The patient was still vomiting from the anesthetic and had taken but little liquid, thus readily accounting for a lessening in the elimination. The nurse, however, looked up the record, found that each catheterization had afforded less urine than the previous one, indicating inaction of the kidneys; she felt the pulse and found it high tension; she boiled a sample of the urine, and found that it became very thick and cloudy, as if albumen were present. She

sent for the physician and stated the case to him. He ordered packs, diuretics, and treatment calculated to re-establish the action of the kidneys, but it took several days of hard fight to save a bad case of uremia. Had the nurse not acted until morning or until the next catheterization, it would probably have been too late.

Bedside Clinics.—More stress ought to be placed upon bedside clinics for nurses, and more teaching given in special symptoms and their meaning. When a nurse has once had pointed out to her in a patient for whom she is caring a definite condition and is told its explanation and significance, she can hardly fail to recognize it when she sees it again; whereas, if she has merely read of it in a book, she may easily overlook it.

Completeness.—Each nurse should make it a matter of pride not to let anyone else see a symptom before she does. She should be eternally on the watch for new symptoms in every patient, for often the cases which seem to her the least interesting are those from which she may learn most. It should be her ambition to become indispensable to the doctor, to know everything which he may ask, to report before he has a chance to ask, and to make him feel that whatever happens, she will recognize the condition and let him know.

This ideal cannot be attained in a month nor in a year, and it is for this very reason that the nurse's course of training is made from two to three years long. She may learn in one year how to do nearly everything which comes in ordinary work, but to be competent to watch a sick patient, to appreciate what is happening to him and why it happens, to recognize and meet emergencies as they arise, to be trusted and trustworthy, she must spend many months in actual contact with patients. It is useless to expect to learn it without this contact.

Exactness.—The nurse should learn to state her observations, and to do it exactly, clearly, and concisely. If she is able to say only that there is "something queer" about a patient, she will not be very helpful to the

physician. She should know what she sees and be explicit in what she says. Do not make statements such as "slept pretty well," but give the approximate number of hours and tell whether the sleep was quiet or disturbed. A diet record which says simply "milk" is of little value, and usually covers ignorance or carelessness; the exact amount taken should be stated.

Expressing Opinions.—The nurse's opinion of a case is not wanted. It is not her province to say why a symptom has occurred, and it is not just to anyone concerned that a doctor should be biased by what he has been told. If he examines the patient with a preconceived notion in his mind, he may be thrown on an entirely wrong track. Avoid making statements such as "Mrs. Smith has a headache and I think it is because her bowels have not moved." Simply state the two facts and leave it to the physician to draw any conclusion which may be warranted.

It is likewise not a nurse's duty to make a diagnosis, since it is obvious that she has not had the training for it. Neither should she be guilty of attempting to prescribe; her knowledge of drugs and their effects is at best superficial; and it takes years of study and observation in these special lines for one to be even moderately successful.

The Limit of a Nurse's Responsibility.—The nurse must realize that her responsibility ends with the carrying out of orders and the watching of the patient. She is in no way accountable for the result of a treatment or medicine, providing it has been correctly administered. It is her place to do exactly as she has been told, without criticism of methods.

There are two exceptions to the above rule of unquestioning obedience. A marked change may have taken place between the doctor's visit and the time for carrying out one of his orders; she should in this instance notify her head nurse of the condition and do nothing until she receives further instructions. Or, she may

suspect that a mistake has been made in an order and that the doctor wrote what he did not mean; in this case she should have the order verified before proceeding with its execution.

Kinds of Symptoms.—There are in general two sorts of things to observe and report, the *subjective* symptoms (what the patient tells you), and the *objective* symptoms (what you see for yourself). They are of equal importance and neither should be omitted.

Be exact in repeating or recording a patient's statement. A difference in wording may amount to a difference in meaning or may give a mistaken impression.

General Appearance.—Always, upon entering a room, either for the first time or for the fortieth, try to get a general impression of your patient. One may in the beginning do this unconsciously and later forget all about it. The best doctors lay great stress upon this point and find it a frequent aid to diagnosis.

Facial Expression.—This is an important item. A serene, comfortable cast of countenance may be a hopeful symptom when other indications are unfavorable; likewise a pinched, anxious look may be the first danger-signal of a serious condition. A dull, apathetic look indicates serious illness. An over-alert, excited expression is a sign of mental disturbance. There are many fine shades of facial expression which a nurse should accustom herself to read.

Lips.—Always note the color of the lips, as well as of the whole face. Observe the line of the nostrils and of the mouth. Note any puffiness under the eyes, whether they seem hollow or sunken, or have dark circles or lines below them.

Eyes.—Note the expression of the eyes, and whether they are quick to respond to the light and to movements or whether they are dull and need a definite time to react. Observe if the eye-lids quiver, twitch, or droop. Note whether the whites of the eyes are bloodshot, bluish, or yellowish. Look at the pupils and see whether

they are more than ordinarily contracted or dilated; note any unevenness in the size of the two pupils, as this is always a serious symptom.

Tongue.—Make occasion each day to look at your patient's tongue. Note the color, whether it is pale, dull, or bright red or purplish. Observe its coating, whether it is light or thick, and the color of it. If the tongue trembles or twitches, if it is very pointed or tense, or wide, soft, and flabby, it is noteworthy.

Breath.—Note any peculiar odor to the breath. If it is fetid, it may indicate a disordered stomach, bad tonsils, nasal catarrh, lung abscess, etc. There is a sweetish odor to the breath of a patient with diabetes; in uremia, an odor of urine.

Teeth.—Note condition of teeth and any peculiarities; much is now being made of dental formation and hygiene. Note the gums, whether they are pink and firm. A blue line at the gums may indicate lead, copper or silver poisoning; spongy, bleeding gums are found in syphilis; note swollen or especially tender gums.

Hearing.—Pay attention to the quality of your patient's hearing, noting whether it is supersensitive, or dull and slow to catch a sound. Any buzzing or ringing in the ears should be reported and certainly any discharge or pain. The case of a foreigner unable to speak English was wrongly diagnosed as typhoid until a nurse found that he was having pain in his ears, when symptoms of meningitis were discovered.

Voice.—Observe the quality of the voice, and try to learn whether any peculiarity in it is of recent origin or connected with the present illness. Hoarseness, a break in the voice, a strident quality, indistinctness of utterance, nasal tones, thick speech, etc., may be of importance. Remark the quickness of response, or any inability to use the voice as the person wishes.

Throat.—If any complaint is made or any peculiarity noticed, look into the patient's throat, asking him to say "Ah" so as to open it to view. If it is an angry red, or

pale and dull looking, if there are spots, red, grey, or whitish, if there is any swelling, call the physician's attention to it.

Cough and Expectoration.—Cough should be noted and described carefully. Observe at what time of day it occurs and whether when the patient is lying down or sitting up. Note whether it is harsh and dry (bronchial), or deep and hoarse; whether it is easy and merely annoying, or whether it racks and exhausts; whether there is a brassy ring to it, a rattle, or a wheeze; whether it comes in paroxysms and if so what seems to start them; whether the cough is accompanied by expectoration, and if so what is its character, frothy, foamy, stringy, tenacious, thick, cheesy-looking; what its color is, white, yellow, greenish, pinkish, light or dark red, or rusty (as the "prune juice" expectoration of pneumonia) if it has any odor, what quantity there is, etc.

Skin.—Pay attention to the skin. This is best done while giving a bath. Note the color of the skin, whether white and waxy (as in cancer), a pallid white (in shock or hemorrhage), yellow (as in jaundice, lead poisoning and gall-bladder troubles) varying from a slight hue to a deep lemon or orange color, or mottled with white patches, red or brown spots, bronzed (as in Addison's disease), sallow in morphine or opium victims, yellowish and waxy (as in Bright's disease), blue (as in cyanosis from any cause).

The face may be blue from faulty circulation or respiration; red from fever; with one cheek red, from an affection of one lung; gray, from silver nitrate poisoning; etc.

Observe any tendency to excessive perspiration, and any special odor therefrom. Notice whether the sweating is localized or general. Note whether the surface of the body is warm to the touch, or cold and clammy.

Rashes.—Look for any rash or eruption, and if found be able to describe it, stating whether it is a fine or coarse rash, a bluish or a spotted condition, whether the spots

disappear upon pressure (as the rose spots of typhoid), whether they are pimples or pustules, or simply roughnesses of the skin; whether their color is pink, red or purple, or copper-colored (as in syphilis); upon what part of the body they are thickest; whether the eruption is painful, or itches, or neither; whether there are dry scales of skin, or moisture. A rash on the buttocks of a baby may indicate intestinal disturbance.

The occurrence of a rash is of great importance, as the patient may be developing a contagious disease which will endanger all about him.

Always *show* a rash to the doctor or head nurse; do not depend upon describing it.

Abdomen.—The nurse should take heed to the general condition of the body, whether well-nourished or emaciated, and whether the flesh is firm or flabby. In particular, the abdomen should be observed and its shape noted, whether full, round and distended, or sunken; hard or soft; whether there is much abdominal fat, or whether the wall is so thin that one may see the movements of the intestines; whether there is tenderness or soreness, or rigidity in any portion. Any scars here or on other parts of the body are to be noted, and bruises or marks of any sort.

Position.—The position which the patient assumes when lying in bed is of considerable importance. A patient who lies flat upon his back is usually weak and very ill, and the fact is not an encouraging one. Knees drawn up usually indicate some abdominal trouble. In colic or cramps the patient prefers to lie upon the abdomen, as pressure relieves the pain. In pleurisy, he lies upon the affected side of the chest; in tuberculosis of the lungs, upon the sound side. Heart cases, or kidney cases with edema, are frequently unable to breathe well lying down and must be kept propped in a sitting position. If the head is persistently drawn back, brain or spinal trouble is to be suspected.

Special Symptoms.—Restlessness, if extreme, is usually a serious symptom. Picking at the bedclothes is a danger-signal, often heralding the approach of death.

Twitching or jerking of the muscles of any part of the body should be promptly reported, as it may precede convulsions, especially in pregnancy or kidney cases.

Persistent hiccup is a serious symptom.

Mental Condition.—Observe any tendency to dullness or stupidity, slowness of response to a question, or any abnormal activity of the brain verging on delirium. If there is active delirium, be able to describe it, whether it is violent, or quiet and busy, preoccupied, or directed toward the person present, whether the speech is incoherent and the sentences wandering and disconnected, or whether there is a definite, persistent idea in the mind; whether the disturbance is continuous or comes in paroxysms, and what seems to produce them. Unconsciousness or coma, from which the patient cannot be aroused, is a very serious symptom.

Sleep.—The amount of sleep should be carefully estimated, and the nurse should be sure of her statements in regard to it. Most people think that they sleep less than they do, and while it is not wise to contradict a patient's statement in this matter, the record should show the exact situation. Do not assume that a patient is asleep because he lies quietly with the eyes closed, but note the character of his breathing; a little practice will enable one to distinguish between the deep, regular breathing of sleep and the controlled, less steady respiration when awake.

If sleep is broken, notice how long are the intervals, and whether the patient lies awake for long periods or for a few minutes only. Notice whether he is disturbed by noises, by dreams, or by physical discomfort. If the sleep is restless, observe whether the patient moves and turns a little as if simply to change position, or whether he flings himself about and tosses from one side of the

bed to the other. All these points aid the physician very materially in diagnosis and treatment.

Pain.—When pain is complained of, assist the patient in describing it, as the exact character of pain may modify the significance of other symptoms, and an inaccurate description may cause a mistake in diagnosis. Have the patient tell you whether it is a sharp pain, a dull ache, a soreness, or a tenderness. Find out whether the position of the pain is defined so that one may put a finger on the spot, or whether it extends over a considerable area. Ask whether it seems deep in or near the surface; whether it is greater upon moving or not affected by it. Note whether the pain is said to be cutting, boring, stabbing, shooting, stinging, burning, throbbing, cramping, etc. Find out whether it is continuous, or comes and goes. Ask whether the same sort of pain has been experienced before, and under what circumstances. See if change of position, heat, pressure, or rubbing helps it. With headache, find out in what portion of the head the pain is, its character, and whether it is a common or an unusual thing. Headache in children is of special importance.

Chills.—These are usually significant. Note the time of day when they occur, and whether they follow any treatment, exertion, emotion, etc. Observe how long a chill lasts (by the clock), whether it is violent, causing the bed to shake and the teeth to chatter despite all efforts at control, or whether it is merely a shivering. Note if the lips and nails become blue, or the face is livid. If possible, take the temperature during a chill, immediately upon its conclusion, and a half-hour afterward. It will often be found normal during a chill and greatly elevated soon afterward. A severe chill is usually followed by a high temperature.

As a rule, a chill which is accompanied or followed by a high temperature should be promptly reported as it may be of grave import. Ordinarily a chill which does not disturb the temperature is nervous in origin and may

be disregarded except so far as to make the patient comfortable at the time of its occurrence. Immediately after operation or after childbirth, chills are more or less common and not serious. A chill which occurs forty-eight hours or more after operation or delivery is, however, usually suggestive of danger and should be reported at once.

During a chill, cover the patient warmly, surround him with hot water bottles, and give hot drinks. After it is over, remove the covers gradually, and if there is sweating, as is commonly the case, dry carefully under the bedclothes and avoid drafts.

Convulsions.—These should be immediately reported, so that the physician may, if possible, arrive before they are over and be able to see the exact condition. Little can be done except to keep the patient from falling out of bed or injuring himself in any way. Biting the tongue may be prevented by putting between the teeth the handle of a spoon or table-knife wrapped in cloth. The pulse should be watched, the color, and the respiration. The exact duration of the seizure should be noted by a time-piece.

Miscellaneous Symptoms.—Menstruation should be made a note of, and the character and amount of the discharge recorded; any pain, whether severe or slight, and any nervous symptoms or mental depression observed.

Nausea should be reported and described accurately.

Dizziness may be significant.

Note if patient complains of a bearing down sensation in pelvis or bladder.

Numbness, tingling, itching, extreme sensitiveness to touch, fainting or feeling of faintness, chilliness, heart-burn, sinking sensation, tympanites, tenderness at any point, etc., all should have the physician's attention called to them, as they may be connected with some on-coming condition which is serious and which might not otherwise be recognized until too late.

REVIEW QUESTIONS

Why when a doctor is in attendance need a nurse observe the patient carefully?

Discuss the importance of definiteness in statement.

Why may not a nurse express an opinion concerning a patient's condition?

Give points to be noted concerning a patient's facial expression.

Give points to be noted about the eyes. The tongue. The hearing. The voice. The throat. The breath. The teeth and gums.

How may cough be described? Expectoration?

Give points to be observed concerning the skin.

What should a nurse note about a rash or eruption?

What points are to be observed concerning the abdomen?

What is the significance of the position which the patient assumes in bed?

Name some symptoms which are especially serious.

Give points to be noted concerning a patient's mental condition.

Give points upon the observation of amount and character of sleep.

How may pain be described?

What is to be noted concerning a chill?

What is to be noted concerning a convulsion?

Name some minor symptoms which may be important.

CHAPTER XV

MEDICAL NURSING. POINTS ON SPECIAL DISEASES

“Make your patient comfortable. It is your first and last duty.”

Beside clinics on typhoid; pneumonia, and any cases of special disease available at the time. Demonstration of lavage and the giving of oxygen.

While in hospitals medical cases are often in the minority, in private nursing they predominate, and the nurse should consider them a preparation for her future work. Any ordinary hospital furnishes at one time or another a considerable variety.

Typhoid Fever.—These cases require skillful care and close attention. It is a common opinion among physicians that in these cases their work is secondary to that of the nurse.

Typhoid is an ulceration of the wall of the intestine. It is caused by a specific germ which is carried in food or water, not in any other way. It is for this reason that a nurse should frequently disinfect her hands while caring for such cases, since germs finding a lodgment under her nails or on her fingers may easily be transferred to food or drink and the patient be re-infected or she herself swallow them and develop the disease.

The disease is gradual in its onset, and often the patient does not seem very ill during the first week. The fever is usually highest during the second week, not touching the normal mark at any time of day. It may rise to 105° or over. The critical period is considered to be the third week, when hemorrhage is apt to occur

from an ulcer extending into the walls of a blood-vessel, or perforation may take place from its eating its way through the intestinal wall. Neither of these accidents is preventable, except as sitting up or any sort of exertion might tend to aggravate them.

The ulcers are not supposed to be healed nor the patient out of danger until the temperature remains normal at all times of day. The fever usually lasts about three weeks and subsides gradually. Re-infection may occur and prolong it for many weeks.

In a certain number of cases delirium occurs during the high fever. It ordinarily requires no special treatment, but the patient should be watched constantly to prevent his exerting himself. Delirium occurring after the temperature comes down is apt to be a serious indication.

Liquid diet is usually ordered, and solids are not allowed until the temperature has been normal for a week. Some doctors permit soft diet throughout the disease, stipulating only that it shall consist of articles which have little residuum and which will not be irritating to the intestine; these include soft toast, custards, gelatine preparations, soft-cooked eggs and some of the cereals. A few physicians allow a general diet upon the theory that it keeps up the patient's strength and shortens convalescence; but very few patients can be induced to eat solid food while the fever is running.

Little medication is given as a rule, and that used is ordinarily some intestinal antiseptic, used with the idea of limiting the infection.

The nursing points to be emphasized are:

1. To reduce the fever and keep it down.
2. To nourish the patient.
3. To keep proper elimination going on.
4. To prevent the accumulation of flatus.
5. To prevent bedsores.
6. To keep the mouth in good condition.

7. To watch, during the third and fourth weeks, for symptoms of hemorrhage or perforation.

1. The technic of baths for the reduction of temperature has been given in Chapter VI. Considerable experience is required to become expert at getting a temperature down. Each patient's peculiarities must be taken into account, as they often influence results. Guard against over-anxiety in the matter of temperature, remembering that in the acute stage many cases are very obstinate. Try not to let the patient know how high his temperature is running. The present tendency is to make less of the mere fact of temperature, and to make less effort to reduce it.

2. Most physicians urge the importance of nourishment given regularly and in proper quantity. The present tendency is to give soft diet throughout the course of the disease, and often some solid food, carefully prescribed. This régime appears to shorten the period of convalescence, since the patient does not lose so much strength nor weight as when fed wholly on liquids. Whatever is ordered, the nurse should get the prescribed amount taken, if it is at all possible. If any article of diet causes gas to be formed, the matter should be reported. If food produces nausea, let the physician know; rectal feeding may have to be resorted to. During the night, it is not customary to waken a typhoid patient for nourishment; but during the height of the fever, he is apt to be restless and may be found awake often enough so that it may be given with considerable regularity.

3. Plenty of water should be given even if it requires urging. It is absolutely necessary that good elimination be maintained in order that the patient may throw off the poisons and waste matters which so rapidly accumulate. Two quarts of water, aside from other fluids, should be taken during the twenty-four hours; if necessary, the nurse must insist that it be taken like medicine,

whether craved or not. A small quantity given often will be better managed than a larger quantity at one time. To be sure that a sufficient amount is taken, it should be recorded each time it is given.

4. If the nurse observes that the taking of any particular kind of nourishment is followed by the formation of gas, she should call the doctor's attention to it. She should see that she has an order for an enema to be given in case of abdominal distention, and should be on the watch to see if it be needed. Gas in the intestines produces discomfort and may cause perforation.

5. The continued high temperature, the great loss of flesh, the impairment of vitality, and the weakness which causes the patient to remain in one position, furnish conditions favorable for the development of bedsores. The nurse should aim to prevent them, and before there is any indication of their occurrence, she should use every means to harden and toughen the skin in exposed places, to remove pressure, to keep the patient dry, etc. If they are once allowed to occur, they are long in healing.

6. The mouth and teeth very readily accumulate the material called *sordes*, a brownish coating containing many microorganisms. Aside from the discomfort which this occasions to the patient, its presence is dangerous. A good mouth-wash used every hour or two during the day and as often as possible during the night, and especially after nourishment, helps much in keeping the mouth clean and comfortable. An excellent mouth-wash is made with equal parts of glycerin, peroxid of hydrogen, lemon juice, and water. In some cases the use of chewing gum may be permitted to cleanse the teeth. A few times a day the teeth should be scrubbed with gauze or a brush. If the mouth is not kept clean it may become so sore as to interfere with talking or swallowing.

7. The symptoms of *hemorrhage* in typhoid are the same as of any internal or "concealed" hemorrhage—

pallor, weak and rapid pulse, sighing respiration, air hunger, sudden drop in temperature, faintness, etc. One or more of these symptoms may be absent, or none may be sufficiently marked to cause alarm until blood be found in a bowel movement. This blood may be fresh (rarely), or thick, dark, and clotted, or it may be mixed with fecal matter making it appear black. Any such passage from the bowel should be saved for the physician's inspection. The treatment ordered in cases of hemorrhage is elevation of the foot of the bed, ice bag to the abdomen, opium to quiet the peristaltic movements of the intestines, and sometimes ice-water enemata. The condition is serious, but not necessarily fatal.

Perforation is usually accompanied by sudden, sharp pain coming without premonition, a sudden drop in temperature, collapse, weak and rapid pulse, blue and pinched face, and general symptoms of prostration. The physician should be summoned immediately. Operation is the only remedy, but it is not undertaken unless it can be gotten at soon after the perforation has occurred and the patient is in reasonably good condition. It is a desperate expedient, but gives the only hope. The abdomen is opened, the perforation found (no easy matter), and either closed by a suture or that portion of the intestine removed and the cut ends joined.

Prevention of Infection.—One of the nurse's chief duties in caring for a typhoid case is to avoid infecting herself and those about her, and to prevent re-infection of the patient. The discharges from the bowels and the urine are the chief carriers of infection and if these are properly handled and disinfected, much of the danger is obviated. Small particles of fecal matter on the bedding or night-clothes or gotten on the nurse's hands from the utensils, may become a source of trouble. Thorough disinfection of the hands after handling or rendering any service to the patient is the only effective

means of prevention. Separate dishes and utensils, properly labelled, should be kept, and these should be boiled daily. To summarize; the nurse in typhoid may prevent infection of herself (a) by disinfecting her hands each time that she handles the patient or articles in the room, (b) by avoiding the use of any article which has been in the patient's room, (c) by keeping herself in good physical and mental condition. She may prevent the infection being carried to other people from her patient (a) by keeping separate utensils for him and allowing no one else to use them until they have been thoroughly boiled, (b) by disinfecting all linen and all discharges before disposing of them, (c) by killing all flies in her patient's room, since these are commonly carriers of infection, (d) by recommending that drinking water be boiled in times of typhoid epidemic and that raw food be not used.

Visitors.—If allowed at all, visitors should be admitted for only a short time. The nurse should see that they do not tire the patient by making him talk, etc.

Convalescence.—This is very slow. During the time, the diet must be carefully guarded and only such articles given as are prescribed by the physician. The patient is apt to have a ravenous appetite and may need to be restrained from over-eating or from indiscretions. In some instances the friends will need to be prevented from giving the patient unwholesome articles of food.

Vaccination Against Typhoid.—This is now a routine practice in many hospitals, and has been found an efficient preventive against the disease.

Other Communicable Diseases.—Few infectious diseases other than typhoid are received in hospitals, but the nurse should know the general precautions to be taken in caring for this class of cases. There is usually but one chief source of infection, and if this be guarded, most of the danger is avoided.

Gonorrhea is a localized disease, its seat usually being the genitals, or in newborn babies the eyes. It attacks

mucous membranes; it cannot be communicated through a cut in the skin. (For precautions to be observed in caring for gonorrhœal cases, see Chapter XIX.) Syphilis is a general infection, though it may have local manifestations. It is communicable in its primary and secondary stages. It may be acquired through a break in the skin. It is curable by means of salvarsan. In all venereal cases the nurse should, if possible, keep her hands from becoming soiled by discharges, and should thoroughly cleanse her hands after handling the patient or his utensils.

Sources of Infection.—In *typhoid*, the stools and urine contain the germs of disease; in *diphtheria*, the discharges from the nose and throat; in *tuberculosis* of the lungs, the matter expectorated; in *small-pox* and in *chicken-pox*, the scales from the skin; in *pneumonia*, the matter expectorated. In *crysipelas*, *mumps*, *whooping-cough*, *tetanus*, and *meningitis*, the mode of contagion is uncertain. *Yellow fever* and *malaria* are carried only by mosquitoes (each by a special variety) and are not communicable in the ordinary sense of the term.

Everything in the room of a patient ill with a communicable disease should be kept for him alone and should be thoroughly disinfected before being returned to general use.

All bedding and body-linen should be well soaked in a disinfecting solution before being sent to the laundry.

Visitors should be limited and should not handle the patient. In all diseases where infection may be carried in the clothing, no visitors at all should be admitted.

The Nurse's Care of Herself.—The nurse should take pains to keep herself in good physical condition, digestion good, skin and all organs of elimination working properly; she should not permit herself to become overtired nor to become unduly anxious about her patient. It is when one is somewhat run down or in poor condition in any way that disease gains a foothold in the system. One in perfect physical condition may handle and care

for contagious and infectious diseases with but little risk. It is wise for a nurse who is caring for typhoid to take a preventive dose of antityphoid vaccine. How long the protection thus given lasts is still under discussion, but it is thought to be from one to two years.

Tonsillitis.—This is a communicable disease and should be treated as such. The nurse who cares for a case of it ought not to care for other patients. Dishes should be kept separate and disinfected. The nurse herself should use a mouth-wash and a gargle to avoid contracting or carrying the disease.

Care of the Hands.—In handling cases of communicable disease, rubber gloves should be worn when it is practicable, and the hands should be scrubbed and disinfected each time that the patient, clothing, or utensils are handled. A good hand lotion should be used frequently in order to prevent the skin from becoming rough and affording a lodging-place for germs, or cracked thus giving an opening for infection.

OTHER MEDICAL CASES

Heart Cases.—Patients with organic heart trouble need watching to prevent them from over-exertion or from undergoing mental excitement. When the patient is quiet, physically and mentally, the heart action is slower, and several beats per minute are saved, amounting to 20,000 or more per day; this gives the heart rest and chance to recuperate. Not much can be done toward effecting a cure, but their comfort should be a consideration. Usually these patients are unable to lie down for sleep, and the nurse must see that the chair or back-rest which they use is of such shape as to support without strain and padded so as to be comfortable. If a chair is used, it should have broad arms; if the patient remains in bed, pillows or rolls should be so placed as to keep the arms from falling or dragging. These

patients are sometimes more comfortable leaning forward, and an arm rest or invalid table should be provided for the purpose. There may be distress in breathing, and whatever is ordered to relieve it should be faithfully applied.

In angina, the paroxysms of pain are severe and terrifying to the patient, though the disease is rarely fatal. Amyl nitrite may be ordered for their relief, it is given by inhalation. The nurse should keep the necessary remedies on hand, so that they may be quickly applied when an attack comes on.

Dropsy.—This is the name given to an accumulation of fluid in the tissues, and is a symptom of both heart and kidney disease; it occasions a great deal of discomfort and may interfere with the breathing. A dry diet may be ordered, and the nurse may do much to aid the patient in following it out and in restraining his desire to drink. Small quantities of water if given often will quench thirst almost as well as larger amounts. When tapping is done to remove the collection of fluid the procedure should be conducted with the greatest attention to surgical cleanliness.

Nephritis.—This is also known as Bright's disease. The important matters in the treatment are attention to diet and promotion of elimination. The diet is usually much restricted; meat may be entirely forbidden, or fish and game may be allowed; certain vegetables are forbidden; milk is usually insisted upon, or buttermilk may be used in its place; a salt-free or salt-poor diet is almost always insisted upon; there must be a low protein intake; the diet is always monotonous, and it is the nurse's task to tempt the appetite and to see that the patient takes a sufficient quantity of nourishment. It is necessary that a large quantity of fluid be taken and the nurse must attend carefully to the matter. The skin must be kept active, so as to relieve the kidneys; hot air or steam baths, hot packs, etc., are ordered, and must be given with great care to obtain results. The

bowels must be kept open, usually by the use of purgatives, especially the salines.

Uremia.—This is also known as uremic poisoning. It is an acute manifestation of nephritis. The urine becomes scanty, and is loaded with casts and albumen; convulsions may occur. The treatment is similar to that for the chronic condition, but more vigorous. The condition is serious.

Diabetes.—This is a disease characterized by excessive secretion of urine loaded with sugar. The patients are usually thin, weak, and nervous. Diet is the important factor in the treatment. The régime begins with fasting or nearly that, and a low calorie diet is the rule. Starches and sugars are forbidden. Thrice-cooked vegetables, considerable milk, very little fat, and very little bread are allowed. The physician will make an exact prescription, and the patient must be instructed in the importance of adhering to it. The nervous symptoms should receive due consideration.

Rheumatism.—This disease was formerly thought to be due to an excess of uric acid in the system, but is now regarded as a form of infection, the origin of which is often obscure. Some cases are believed to be traceable to tonsillitis, others to abscessed teeth. Exposure to cold and damp frequently brings on or aggravates an attack, but is not its primary cause.

Rheumatic patients are very sensitive to changes of temperature and weather and should be protected against them as much as possible. In cold weather it is more comfortable for the patient to sleep between blankets; these should be changed often enough to keep them sweet and wholesome. The nightgowns should be of flannel or flannelette and a warm dressing-sacque or extra wrap about the shoulders is usually needed. The patient may perspire from the warm clothing and bedding and, while this is desirable in that it promotes elimination, the skin should be dried often enough to prevent chilling; the drying should be done with a rough towel and entirely under cover.

If the trouble is in the joints, great care is needed in helping the patient to move, as the pain suffered is intense. Rubbing the affected parts with oil of wintergreen and wrapping them in cotton may relieve somewhat. Fomentations also help.

In all forms of rheumatism, heat applied in one way or another is useful. Baking, electric light, hot baths, etc., are used, and massage may be ordered. Everything should be done to promote elimination; the nurse should see that the patient drinks a large amount of water, and should report if the bowels do not move regularly. Drugs must often be given to relieve the pain; aspirin, the salicylates in large doses, etc., are used. Special diet is ordered and should be strictly enforced.

Neuritis.—This is an acute inflammation of the nerve trunks. The symptoms are much like those of acute rheumatism, and the treatment is similar. The pain is intense and persistent, and frequently requires drugs for its relief. Chloroform liniment, externally and morphine or hyoscine by hypodermic may be used.

Gastritis.—This is an inflammation of the lining membrane of the stomach. Its symptoms are much like those of gastric ulcer, pain and distress in the stomach, vomiting, and sometimes hemorrhage. The diet is always restricted, or rectal feeding may be resorted to. Only such articles as are ordered should be given and in exact quantity. Any indiscretion is sure to aggravate the trouble.

Gastric Ulcer.—Ulcers of the stomach are usually situated at the pylorus, where they are constantly irritated by the passage of food. In some cases they may be cured without operation by adherence to a strict diet for a considerable period. Excellent results are obtained from a carefully prescribed and exactly carried out diet of milk and eggs, rest in bed, and heat over the stomach.

Test Meals.—In the course of examining stomach cases, test meals may be ordered. These may consist

of one or two slices of bread or toast and a measured amount of water. This is given in the morning when the stomach is empty, and after a definite period of time has elapsed (one-half hour or more), a stomach tube is passed, the stomach contents removed and taken to the laboratory for analysis and testing. By this means any abnormal functional condition is discovered, excess or lack of the hydrochloric acid, scantiness of the pepsin, etc. The nurse should remember that any inexactness



FIG. 43.—X-ray picture of the stomach and intestine after a bismuth meal.—
(Codman.)

on her part, any mistake as to the quantity of food given or the time of giving, may spoil the test or render it faulty or the diagnosis incorrect.

For *x*-ray examinations of the stomach, a bismuth or barium "meal" is given. A few ounces of bismuth sub-nitrate or barium sulphate are stirred into a glass of water and drunk by the patient. The bismuth or barium adheres to the stomach wall, and being opaque to the *x*-rays, throws a shadow and clearly outlines the stomach.

For examinations of the colon or rectum an enema of bismuth or barium and water is given. As it works its way upward, the shadow gives a clear picture of the size and position of the large intestine.

Diarrhea.—All kinds of diarrhea are due to some irritation in the intestine. It may be caused by an infection, as in typhoid, cholera, dysentery, etc.; or it may be occasioned by improper food, such as partially decomposed meat or fruit (as in ptomain poisoning), or by indigestible substances (as in the so-called cholera infantum). The treatment consists in first getting rid of the cause of the trouble either by purgatives or enemata, then applying soothing remedies or those which are antiseptic. Change of food is important, and unirritating diet is ordered. With adults, fruit, vegetables, and meat are discontinued or entirely liquid diet advised. With babies, milk is withdrawn and albumen water, barley water, beef juice, etc., substituted. The weakness and prostration which accompany these troubles may become extreme, even reaching danger point. The pain is apt to be severe, and may require drugs for its relief, but it usually yields to hot applications.

Intestinal tuberculosis produces a chronic diarrhea, which may need continued medical treatment. In this, and to a degree in all cases of diarrhea, care should be exercised in handling the discharges from the bowels. The nurse's hands should be scrubbed and disinfected after touching bed-pans or other utensils so as to avoid the danger of infecting herself, re-infecting the patient, or carrying the trouble to other patients. The summer diarrhea of infants is notably a communicable disease, and may be spread by the slightest carelessness.

Bronchitis.—This is an inflammation of the bronchial mucous membrane, and may be a chronic condition with acute attacks. It is accompanied by persistent cough, scanty or profuse expectoration, and there may be pain and fever. It is less serious than annoying. The bowels should be kept free and the kidneys active, the patient protected from cold, but given fresh

air. The diet is soft or liquid. Cough mixtures are prescribed. Bronchitis may be the forerunner of pneumonia.

Asthma.—This is spasm of the walls of the smaller bronchial tubes, which produces difficulty in breathing. It comes in unannounced paroxysms, and the distress accompanying it is often very great; it may last for but a short time or for several hours. The treatment may consist of moist inhalations, some volatile drug being put into a kettle or pot of water which is kept steaming while the patient inhales the vapor. Sometimes pastilles are burned and the smoke is inhaled; or cigarettes of stramonium leaves are smoked. In severe cases morphine, amyl nitrite, or even chloroform may have to be given to afford relief.

Pleurisy.—This is an inflammation of the lining membrane of the chest. It usually accompanies some infection of the lung, as pneumonia or tuberculosis. It may occur in other infections, as rheumatism, typhoid, nephritis, septicemia, etc. It is characterized by sharp pain, inability to take a long breath, cough, fever, etc. The pain may be relieved by pressure, and is often controlled by strapping the chest with strips of adhesive plaster overlapping each other. The elimination should be kept good. The diet is of liquids or easily digested solids.

There may be in pleurisy a collection of fluid in the pleural cavity, or even pus formation (empyema). It may be found necessary to aspirate, *i.e.*, to introduce a large needle for the removal of the fluid; this must be done with careful attention to asepsis. If a large abscess develops, resection (removal of a portion) of a rib may be required; in this instance, a drainage tube is left in the wound and must be watched; the patient should lie on the affected side or be propped so that drainage will be continuous. If the tube ceases to drain, the surgeon should be notified. The dressings should be changed before they become saturated with the discharge.

Pneumonia.—This is an acute and always serious disease. It is an inflammation of the lung substance, which results in the blocking of the air cells, interference with breathing, and prevents proper oxygenation of the blood. In this way, additional work is thrown upon the heart. The disease is caused by an organism (the pneumococcus) which exists in the sputum and which may be carried by the air. Cold and general poor condition render one liable to contract the disease, or it may follow upon the irritation of an anesthetic, or the congestion due to lying long in one position, as in old people, typhoids, etc. The germs of pneumonia are often found in the mouths and throats of healthy persons and need only favorable conditions to produce the disease.

We have in pneumonia high fever, weak and rapid pulse, cough, expectoration containing blood (it may be pinkish, red, or brownish in color, designated as "prune juice" or rusty). Delirium may occur. Pleurisy may be a complication.

The patient is kept in a cold room with plenty of fresh air, outdoor treatment being used when it is available. Ice bags are kept upon the chest, and cold sponge baths are given to reduce the fever. Liquid nourishment is ordered, and should be given with regularity as it is important to keep up the patient's strength. The position should be changed often to avoid danger of congestion and consequent extension of the disease. Keep heavy bedding off the patient's chest, by means of a *low* bed cradle, or by pillows propped at his sides. Coughing should be restrained as much as possible, since it exhausts the patient and produces irritation which increases the bleeding from the air cells. The patient should use a paper sputum-cup or pieces of gauze to receive the expectoration, and these should be promptly burned, except that a specimen should always be saved for the doctor's visit. The sputum contains the germs of the disease and is therefore highly infectious. Wash

both your own and the patient's hands frequently to guard against this danger.

The temperature as a rule falls by *crisis*, dropping suddenly from the fifth to the ninth day to normal or subnormal. There is throughout the disease great danger from heart failure, but especially at the crisis. Heart stimulants are usually ordered to tide over this period and may be needed for some time afterward. No exertion should be allowed, and every effort should be made to conserve the patient's strength.

There may be difficulty in breathing and oxygen may have to be given to overcome the asphyxia caused by the filling up of the air cells in the lungs. Saline may be given intravenously or under the skin. Bleeding is done with good results in a few selected cases. The disease is frequently shortened or lessened in severity by doses of anti-pneumococcic serum, and this treatment is coming into common use; the injection is made with antiseptic precautions in the muscles of the back or side of the chest.

Meningitis.—This is an inflammation of the covering membranes of the brain and is similar to *cerebro-spinal meningitis* which involves the spinal cord also. Both diseases are due to an infection of some sort, from tuberculosis, syphilis, middle-ear disease, or even from intestinal troubles. It is often epidemic, but the means by which it is transmitted is not known. It usually occurs in children, and very few of them recover.

There is fever, severe pain in the head, back, and limbs, great sensitiveness to light and sound, convulsions, etc. The patient should be kept in a darkened room, and shielded from all noise. The elimination should be kept active. Ice bags are kept on the head. Sedative medicines and treatment are given. The convulsions may require morphine or even chloroform to control them.

Paralysis.—This is caused by the giving way of a blood-vessel in the brain and pressure from the clot thus

formed. It is due to hardening of the walls of the arteries (arterio-sclerosis). It may affect the whole of one side of the body (hemiplegia) or the lower limbs (paraplegia). In mild cases, where the hemorrhage is slight, the patient may make nearly a complete recovery. In some cases there is a permanent loss of power; these are the ones most commonly seen in hospitals.

The care of these cases is that accorded to any helpless patient, change of position, rubbing to ease any aching in the limbs, precautions against the development of bedsores, especially if there is incontinence of urine or feces. Little encouragement can be given, for unless improvement takes place during the first few weeks it is not likely to occur.

Locomotor Ataxia.—This is a disease of the spinal cord, due usually to syphilis. There is a peculiar walk—a sort of flopping gait—with lack of co-ordination (ability to control both sides of the body in harmony), inability to stand with the eyes closed, sometimes double vision, and always a great deal of pain. The condition is incurable, and there is rarely even temporary improvement. The nurse's work for these patients consists largely in measures for the relief of pain and in keeping up the patient's spirits.

Oxygen.—This is a colorless and odorless gas. It is put up for use in metal tanks with a valve at the top. A rubber tubing is attached to the valve and on its end is some sort of an inhaler; this may be simply a funnel which can be inverted over the mouth and nose of the patient, or it may be a small glass nose or mouth-piece which can be placed so that the stream of oxygen may be directed into the throat.

Oxygen is administered when for any reason the respiration is interfered with and the blood is not being purified rapidly enough in consequence. The giving of the gas requires the constant attendance of one person, as the tube and mouth-piece must be held in place so that the patient may get the full benefit of the inhalation.

It must be kept coming in a slow but continuous stream and regulated according to the condition of the patient. It may be ordered given five minutes out of each fifteen, fifteen minutes out of each hour, or whenever the face becomes blue and the respiration labored. It may even have to be given continuously for several hours at a time. The gas is expensive, so that the valve must be



FIG. 44.—Gastric lavage. Irrigation of the stomach.—(Kellogg.)

kept closed tightly when not in use, and no more than is required allowed to flow at any time.

Lavage.—This is also called stomach washing. It is employed to remove bile or undigested food, in persistent vomiting, for the treatment of stomach disorders, etc.

The best stomach tubes are provided with a funnel

and a bulb, and are marked to indicate the distance they are to be inserted. The tube should be clean, but not necessarily sterile. At least a gallon of warm solution should be provided, saline, boric, soda solution (a heaping teaspoonful of baking soda to a gallon of water), or plain water being used. There should be a



FIG. 45.—Gastric lavage. Emptying the stomach.—(Kellogg.)

rubber sheet to protect the patient's clothing, several towels, a good-sized slop-jar, and a white basin in which the stomach contents may be first received for inspection; in case some of the material is to be saved, a third basin will be needed.

The patient, protected by the rubber sheet, should sit or be propped up with pillows; a small emesis basin may

be at hand in case of need. The tube is wetted and introduced into the throat, the patient being told to swallow. (If the throat is very sensitive, a cocaine spray is sometimes used.) The tube is pushed rapidly in, as far as the mark upon it (about twenty inches); when in place, it should be held firmly, as nausea is caused if it moves about. A pint or more of solution is poured into the funnel, and before it has quite all run down, this is inverted over the jar and the fluid removed by siphoning. The washing is repeated until the fluid returns clear. In recording lavage, state the quantity of solution which was used.

Most persons retch and vomit the first time that a stomach tube is passed, but after a few times they become accustomed to it and are not much disturbed by the treatment.

The stomach tube after use should be rinsed by letting hot water run through it with some force, washed in soap and water, boiled, and put away in a clean box.

REVIEW QUESTIONS

What is typhoid fever?

What diet is given in typhoid?

What are the nursing points to be emphasized in the care of typhoids? Discuss each point.

What are the symptoms of hemorrhage in typhoid? Of perforation?

How may a nurse prevent the spread of typhoid infection?

What is the source of infection in typhoid? In diphtheria? In tuberculosis of the lungs? In the eruptive diseases? How is erysipelas spread? Yellow fever? Malaria? Gonorrhea? Syphilis?

How may a nurse avoid contracting a contagious disease from a patient for whom she is caring?

Give points to be observed in the care of tonsillitis.

Give points in the nursing care of organic heart disease. Dropsy. Nephritis. Uremia. Diabetes. Rheumatism. Neuritis. Gastrotritis. Gastric ulcer.

What is the purpose of a test meal? Of what is it composed?

What is a bismuth or barium meal, and what is its purpose?

For what is an opaque enema used?

What causes diarrhea? What is the treatment for it?

What precautions should be taken in handling cases of diarrhea? Give points in the nursing care of asthma cases. Of bronchitis. Of pleurisy.

What is pneumonia? Give points to be observed in the nursing of this disease. What is crisis?

What is meningitis? Give points concerning its care.

Give points to be observed in the care of paralyzed patients.

What is oxygen? For what is it used? How is it given?

Tell in detail how stomach washing is done.

CHAPTER XVI

SURGICAL NURSING

“Let her resolve that her patients shall receive their due, even more than their due, at her hands; and that through her presence, her care, and her thought, they shall be surrounded by everything that will hasten their recovery or lessen their suffering.”

Demonstrations.—Preparation of field of operation. Care after anesthetic. The Fowler position. **Bedside clinic** of special operations and fractures.

A large percentage of the cases in a modern hospital is surgical. This renders their care an important part of the nurse's work.

A nurse must be on her guard against becoming “hardened” or even too matter-of-fact in regard to surgical patients. These cases may become an old story to her, but for each patient who comes it may be the event of a lifetime. While the nurse should do her utmost to reassure and to keep the patient from being nervous, she should avoid treating the subject of operation lightly. It is well to remember that while few operations are in themselves dangerous, the taking of an anesthetic is a serious matter.

Patients for operation are usually sent to the hospital twelve to twenty-four hours ahead of time, to give opportunity for proper preparation.

This preparation consists of two parts, preparation for the anesthetic and preparation for the operation.

Preparation for Anesthesia.—Before an anesthetic is taken the stomach and intestines should be as empty as possible. It is practically impossible to get the whole intestinal tract empty, but we endeavor to remove as

much of the waste material as we can. If there is food in the stomach, there is likely to be more nausea than would otherwise occur; and there is a very real danger that if vomiting takes place during unconsciousness food or fluid may be drawn into the trachea and set up an irritation or even pneumonia.

If there is an accumulation of waste material in the intestines, it prevents or hinders the elimination which is so necessary in order that the patient may make a proper rebound into health from the depression of the anesthetic and the shock of operation. Also in abdominal operations, empty intestines facilitate the actual work.

Diet Before Operation.—A cathartic may be given the day before operation and a light diet is ordered, that is, food which can be quickly digested and readily absorbed and which leaves comparatively little residuum in the bowel. (It is for this last reason that fruit and vegetables are not advised.) As a rule, no food at all is given for twelve hours before operation, or if any is allowed, only liquids. It is better not to give milk, since with many people milk sets up a fermentation in the intestines which is very undesirable, and if it remains in the stomach, hard curds may be formed which are almost as troublesome as solid food.

Water.—The patient should be urged to drink freely of water up to about four hours before operation. It flushes the kidneys, clears the pores of the skin, and prevents to a degree the suffering from thirst which follows recovery from an anesthetic.

Nothing should be given by stomach for two hours before an anesthetic.

An enema is usually ordered given a few hours before operation even though the bowels may have moved freely from the cathartic. This is done to make doubly sure that the large intestine is empty of fecal matter. If an enema is given very shortly before operation, especially if salts have been given, and the bowels have

not yet become quiet after it, the relaxation of the muscles from the anesthetic may cause a bowel movement to occur while the patient is on the table, a most distressing and unfortunate accident.

Specimen of Urine.—A sample of urine should be saved the morning of operation. This should be secured before the enema is given in order to be certain of obtaining it. Most anesthetics are irritating to the kidneys, and if any disturbance exists already in these organs (and is discovered by a urinalysis), the anesthetist may change the anesthetic or the mode of giving, or the surgeon may postpone the operation until the condition can receive treatment.

Bath.—The patient should have a full cleansing bath the day before operation, tub, shower, or sponge, as the physician may desire or the patient's condition permit. If the hair is dirty the head should be shampooed.

Local Preparation.—The field of operation should be specially prepared and rendered as nearly surgically clean as may be. The area is first shaved, to remove not only the coarse hair, but also the fine, almost invisible down which covers all parts of the body. The skin should be scrubbed with a soft brush or with gauze and green soap. The soap should be carefully washed off and another scrubbing done with 1-2000 bichloride solution or whatever antiseptic is ordered. Put on a dry sterile dressing.

The area to be prepared should extend a considerable distance beyond where the incision is to be made, and should provide for all contingencies, such as the making of a second incision for drainage, or the changing of the position or course of the original incision. The area prepared for the various operations should be as follows:

For a *vaginal* or *rectal operation*, the genitals, the groins, the buttocks, and the inside of the thighs half-way to the knees.

For an *abdominal operation*, the surface extending

from the breast-bone and ribs to below the groins, and as far around the sides as can be reached without having the patient turn.

For a *stomach* or *gall-bladder operation*, prepare to the nipples above, to three inches below the navel, and well around the sides.

For a *kidney operation*, across the back, to the middle of the abdomen, and at least fourteen inches up and down. For both kidneys, prepare an entire girdle of the body.

For the *breast amputation*, prepare from the clavicle to the waist line, from the shoulder-blade in the back to the nipple on the opposite side, and the arm to the elbow.

For a *mastoid* or *skull operation*, prepare three or four inches in all directions from the spot to be operated upon. This will usually include about one-third of the head from which the hair must be shaved.

Preparation Tray.—Many hospitals provide a large tray upon which may be placed all the articles needed for doing a preparation; it can be carried to and from the patient's bedside at one trip. Its contents are, usually, a basin and a pitcher of warm, sterile water, a basin of bichloride solution, green soap, a razor, a soft brush or gauze for scrubbing, alcohol, three or four towels, sterile dressings, and a binder or bandages.

Some surgeons do not wish any preparation done except that the area be shaved and painted with tincture of iodin.

Modesty and consideration of the patient's feelings should mark the work of the nurse during the preparation. No more exposure should be permitted than is absolutely necessary, even though the patient may not appear to mind it. When both abdominal and vaginal preparations are to be done, do the abdomen first, and cover it while you are preparing below.

A nurse in training should not do a preparation upon a man patient which involves the slightest exposure. Such preparations should be done by an intern or orderly.

Preparation for the Operating Room.—Just before the patient goes to the operating room a catheterization should be done or she be required to urinate. If this is omitted, the relaxation of the muscles under the anesthetic may cause the patient to urinate involuntarily upon the table, or the bladder may become distended and interfere with the work of the surgeon.

The patient should be dressed in a warm, short night-gown which opens all the way down. In cold weather, two gowns are better. Long stockings or leggings should be put on. A woman's hair should be braided in two plaits. Rings and jewelry of any sort are out of place, except that a wedding ring may be allowed. Most anesthetists wish that plates or loose teeth be removed.

Care After an Anesthetic.—When the patient returns from the operating room, he should be put into a warmed bed and covered well. Even in summer, there should be considerable cover until he has reacted well from the depression. There should be no pillow until the nausea has worn off. If the operation was abdominal, put a pillow or roll (protected by a rubber slip) under the knees to support them and to relieve the tension on the abdominal muscles.

An unconscious patient should not be left alone even for a minute. He may fall out of bed, or may injure himself by striking the bed, may vomit and get matter into the trachea, may disarrange the covers and become chilled, or may suddenly collapse. The nurse should remain at the bedside, and see that the patient is kept covered and lies quietly. If vomiting occurs, turn the head to one side and hold the basin. When the emesis basin is not in use, keep it out of sight, as its presence suggests nausea.

Too much stress cannot be laid upon the guarding of hot water bags. If left in the bed with an unconscious patient, they should be placed outside the bed-covers, never next to him. If the bed and blankets wrapping

the patient are warm, it is better to dispense with hot water bags entirely, as, despite precautions, burns occur frequently.

What to Watch.—The pulse is the important thing to be watched, and any weakness or irregularity in it should be reported at once. Note the color of the face and report any blueness or pallor. Watch the respiration, noting if it be shallow, sighing, or irregular. Any marked or sudden *change* in pulse, respiration or color should be promptly reported. A gradually rising pulse is also a danger signal.

After the patient becomes conscious, if his condition is good, he may be left alone for a few minutes at a time, but should have the bell within easy reach and be told exactly what he may and may not do. Many surgeons insist upon a special nurse for the first 48 hours in all serious cases.

The First Care.—Bathing the face, sponging and rubbing the arms and legs, sponging and rubbing the back (if the patient be allowed to turn) are very grateful to the fresh operative case. A cold cloth or ice bag on the head often relieves the headache which so commonly follows the taking of an anesthetic. Frequent rinsing of the mouth relieves the extreme thirst; bits of cracked ice if allowed may be given from a spoon.

Quiet should be insisted upon, as the pain and nausea are aggravated by moving or talking. It is better that the nurse sit rather than stand, as it gives the patient a sense of well-being which he does not have if one is plainly on the *qui vive*. If relatives remain in the room they should sit quietly, preferably at some distance from the patient, and should not talk to him. The room should be darkened, though a direct light may be shaded. If plenty of fresh air is admitted, the patient will recover more quickly from the anesthetic.

Many patients who retch violently fancy that they may "burst the stitches," but the nurse may assure them that such an accident is practically impossible.

After water is allowed, remember to give it frequently and in small quantities. If a patient goes for a long time without water, he may become so thirsty that he will drink enough to produce a recurrence of the nausea.

Do not report pain or ask that anything be done to relieve it until you are sure that the patient is quite out of the anesthetic. If the surgeon wishes anything given sooner, he will leave an order for it.

There is some danger from hemorrhage after operation, and the nurse should know the symptoms and be on the



FIG. 46.—Bed elevated. Chair protected from scratches.—(Aikens' "Home Nurse's Handbook of Nursing.")

watch for it. Paleness of the face and lips, weak pulse, faintness, "air hunger," and sighing respiration may indicate internal hemorrhage when there is no blood to be seen about the wound.

With elderly persons, it is customary to prop them up in bed very early, as there is considerable danger of a *hypostatic* pneumonia, due to stagnation of blood in the back part of the lungs.

The bed may be ordered raised at the foot, in which

case the bars at the head of the bed should be protected by a thin pillow or a heavy blanket and the patient kept from sliding up against them. If the bed is raised by being set upon a chair, the chair should be protected against scratches by having a heavy towel put over the seat.

If the head of the bed is raised or the patient kept in a sitting position, he must be propped comfortably with pillows or supported under the hips to prevent him slipping down.

Surgeons differ in regard to allowing patients to turn soon after operation; cases differ, also, and a nurse should be sure of her ground before permitting a patient to move about. On the other hand, she should not keep a patient lying on his back without good reason or a specific order to that effect.

If a patient accidentally falls or gets out of bed during the first few days after operation, the fact should be at once reported. There is, however, little real danger from such an occurrence, aside from the chance of his striking something which might injure him. There is little likelihood even that stitches may be pulled out, as those which hold the muscle, being usually of catgut, are much stronger at first than they are later when the material begins to be absorbed.

A nurse is always permitted to ask what operation was performed, and she should make it a point to do this so that she may give intelligent care and know what points are to be guarded or specially watched.

CARE AFTER SPECIAL OPERATIONS

Curetment.—If a simple curetment has been done, the care is directed chiefly toward helping the patient to recover comfortably from the anesthetic. There is usually little or no pain. If any is complained of, try a hot water bag on the abdomen before reporting it. Bleeding from the genitals to any amount should be

reported. Fluid food is given for the first twenty-four hours, soft diet the second day, and a full tray served after the third day, providing of course that the patient is not distressed from the anesthetic. The patient is usually allowed to be up at the end of a week.

Abdominal Operations.—In abdominal cases, after the immediate pain and nausea are relieved, general care is given until the second or third day, when it is important that the bowels should move. This is to be accomplished with as little disturbance as possible to the intestines, most surgeons preferring to give only enemata, though some order a cathartic. Nearly all abdominal cases suffer from gas, and frequent and thorough enemata must be given to relieve it. Any failure to relieve, or any marked abdominal distention, should be promptly reported. If the patient complains of an aching thigh on the third or fourth day, do not rub it, but report the condition. Phlebitis may be developing, and rubbing might do serious harm. Watch also for any bladder disturbance.

The diet is liquid for a few days, soft for a day or two, and in ordinary cases careful full diet is allowed by the end of the first week. If the nausea and vomiting persist for several days, it may become necessary to feed by rectum in order to conserve the patient's strength.

After abdominal operations patients are allowed to sit up in bed or in a chair according to their strength and previous history, and according to the length of the incision and its satisfactory healing. Surgeons do not agree as to the danger from hernia, the formation of adhesions, etc., in getting up, but the tendency is to shorten the time that patients are kept in bed. When a patient gets out of bed for the first time, he should not remain more than fifteen minutes, and should not be left without a call bell at hand.

Appendicitis.—Operations for appendicitis are divided into two classes, those with and without drainage.

In uncomplicated cases without drainage, having

few adhesions, and where a very small incision was made, or the "gridiron" incision used (the abdominal muscle being split, not cut), there is practically no danger of hernia, and the patient is sometimes allowed out of bed as early as the third or fourth day, or may even leave the hospital at the end of a week. If there were many adhesions and a longer incision was necessary, the case follows the course of an ordinary abdominal operation.

Appendicitis cases which are drained are usually propped in bed from the first or gotten out of bed very early, but are not allowed on their feet. They remain in the hospital for some weeks or until the discharge ceases. The temperature should be carefully watched. A sudden cessation of drainage, or any abdominal tenderness, should be promptly reported.

Stomach and Intestinal Cases.—These are kept very quiet for a few days and little food given. After that, only such food as is ordered may be allowed and the nurse should be very sure not to take any liberties with the diet.

Gall-bladder Cases.—These require the care accorded to abdominal cases. The drainage should be watched; if it is connected with a bottle, an occasional glance will reveal the condition of affairs; if it stops, the fact should be reported. If the dressings become soiled, they should be promptly changed, as they are sticky and uncomfortable.

In all drainage cases, care should be taken of the skin about the wound. The discharge is often irritating and the skin may become excoriated. Sterile vaseline or zinc oxide ointment may prevent or relieve the trouble, or the surgeon may prescribe.

Rectal Operations.—After operations upon the rectum there is apt to be a great deal of pain. Morphine is usually ordered for its relief, and may even be given before the patient leaves the operating-room. A hot water bag made very warm laid against the rectum over a dressing of some sort may sometimes help the pain.

Little food is given for a few days, as it is desirable not to have the bowels move until the surfaces are well healed. The first movement is apt to be painful, and there may be some bleeding. Some surgeons leave a tube in the rectum for a day or two, to permit the escape of gases and to prevent the sphincter muscle from contracting too tightly. An oil enema is given before removing the tube.

Bladder Operations.—These require deft handling and skilled nursing. The tissues are very sensitive and any but the gentlest touch produces acute suffering. If there is a catheter left in place for drainage, it should be watched and any stoppage at once reported.

Perineorrhaphy.—This class of cases need the best of care to assure success. A careless or ignorant nurse may spoil the work of the best surgeon. The wound being so close to the rectum, there is very great danger of infection and consequent sloughing of the stitches. Some surgeons insist that the patient be catheterized for some days or that she be required to lie on her face to urinate, so that the urine may not fall upon the stitches; if any should get on the stitches, thorough irrigation should be done, usually from a pitcher, and the stitches dried (by patting, not by wiping) with a bit of sterile cotton or gauze. The solution used for irrigating should be tested as to temperature by pouring a little upon the back of the hand, as the parts are very sensitive and water which is too hot or too cold occasions great discomfort. Many surgeons tie the ends of the stitches together into a bunch, which should be kept wrapped in sterile gauze or cotton to prevent rubbing. If any ends are left, put a bit of sterile cotton underneath them to keep them from pressing into the flesh.

Patients who have had a perineorrhaphy done often complain a great deal of the cut and pull of the stitches. Compresses wrung out of hot salt solution and laid over them may relieve. Both compresses and solution must be sterile.

The patient should be told not to strain for a bowel movement, as she may tear out or loosen the stitches. The anus should be carefully cleansed after a bowel movement (by sight, not by touch), and the sponging should be done toward the spine, never toward the vagina.

Vaginal Hysterectomy.—After this operation there is nearly always drainage left, and the discharge from it should be noted. It is common for a considerable quantity of pinkish peritoneal fluid to escape during the first few days. Any bleeding, rise of temperature, or foul odor to the discharge should be at once reported.

Hernia.—After operation for hernia the patient should not be allowed to make much effort in turning or attempting to sit up. These patients are usually kept in bed longer than the ordinary abdominal case, as it is important that the muscle become well healed and solid before any strain or weight is put upon it.

Breast Amputation.—These cases may be allowed to move about in bed as much as they can with comfort. They sit up early and are allowed out of bed as soon as they feel strong enough. They should not be permitted to use the hand on the affected side until the doctor has been consulted, and should not lift, sew, or eat with it for some time. Drainage is usually put in in these cases; if the discharge soaks through the dressings at the back, it should be reported so that they may be changed.

Operations upon the Skull.—After trephining or other skull operations the patient should be kept quiet, physically and mentally. Visitors should not be allowed, and if the family comes in, they should not talk to the patient. Any mental disturbance or any rise of temperature should be reported.

Mastoid Cases.—These usually recover rapidly and are soon allowed out of bed. Any pain occurring after the first day and any rise of temperature should be reported.

Removal of Tonsils and Adenoids.—These cases should

be watched for excessive bleeding, the amount being judged by the pulse, color, and general condition. Much blood is swallowed and may be vomited later. Cold water and ice are permitted as soon as the stomach will bear them. Ice cream, sherbets, and cool drinks are usually given the first day.

Plastic Operations of the Face.—These heal quickly, as a rule, but care should be taken that the patient does not get his fingers under the bandages and infect the wounds.

Operations for Goitre.—In these cases there is great danger of hemorrhage and any excessive bleeding should be at once reported. These cases need very close watching for the first thirty-six hours, but after that the danger is practically over and they make rapid recovery.

Amputation of Extremity.—After amputation of hand, foot, arm, or leg the nurse should watch for hemorrhage, and later for symptoms of infection. The pain is apt to be troublesome. The sensations which the patient refers to the part which has been removed are very annoying; they are due to the irritation of the cut ends of the nerves which formerly supplied those parts and which when pressed against in the wound give the same sensation as if the part were still there. This trouble may persist for a long time, and little can be done to relieve it. There is often considerable pain from a tight bandage. It may be loosened slightly or reported to the supervisor.

Burns.—Cases of burn have a great deal of pain. The nurse may help to alleviate it by supporting the bed-clothes so that their weight does not come on the injured surface; by relieving pressure against the bed by pads, rings, pillows, etc., *around* the injury; by changing the patient's position whenever possible.

The bed should be well protected in burn cases, for the dressings used are often moist or oily and soil everything with which they come in contact. If the dressings

become foul-smelling at any time, the doctor's attention should be called to them.

The pain of burns may be so severe as to require morphin to relieve it. After the first few days the nurse should watch the matter carefully and try to judge whether the drug is still required or whether the patient is becoming addicted to it.

Wax Dressings.—Many surgeons now dress burns with ambrine or some of the newer paraffin preparations. This prevents the severe pain, the sloughing, and the scarring. The dressings are done according to a special technic, which must be exactly carried out in order to insure success. Its main points are as follows:

Carefully peel off yesterday's dressing.

Pour sterile water or weak permanganate solution gently over the surface to remove any discharge present.

Dry the surface *thoroughly* by laying sterile gauze on it and by fanning for some minutes. *Do not sponge.*

Cover the raw surface of the burn with ambrine or the paraffin mixture used as hot as the patient can bear it. (Test by dropping some on the inside surface of your own arm.) Apply it rapidly with a camels' hair brush or with a spray. Cover it quickly with a thin film of cotton.

Apply quickly a second coat of the paraffin mixture and cover with a thick pad of cotton to retain the heat. Bandage lightly.*

Fractures.—The care of serious fracture cases requires the greatest possible exactness and skill. The patient must be kept clean and dry, assisted to the comfortable use of bed-pan, urinal, etc., without pulling on the injured part or disarranging splints, extension apparatus, etc. If the hospital owns a good fracture bed, the work is made much easier, but even with this, great care is required that the injury shall not be disturbed, nor the patient suffer from a bed sore. Bed-

* The technic given is that of the inventor of ambrine, as used at St. Nicholas Hospital, Issy, Paris.

sores can only be prevented by beginning the very first day of the patient's residence in the hospital with measures to relieve pressure and to prevent dampness or irritation of any sort.

Two nurses are needed for changing the bed of a patient with a fractured thigh or hip, and it is foolish for one to attempt it alone. Much care must be exercised so that not the smallest wrinkle be left in mackintosh or sheets; they should be adjusted and smoothed many times a day.

These patients often complain of pain in the heel. It is due to pressure on the bed and may be relieved by putting a small, firm pad under the ankle so as to lift the heel quite free.

When extension apparatus is used, the nurse must watch that the patient does not slip down in bed so that the feet come against the foot-piece and the extension be rendered useless. If this occurs, she should report it to the interne or head nurse and not attempt to remedy it herself. If sand bags are used, they must be kept in position, only slight changes being allowed when the patient complains of discomfort.

The pain from a fracture, though not usually severe, is pretty continuous and therefore hard to bear. Being compelled to lie in one position day after day is of itself productive of aching and discomfort. The pain does not in most cases need drugs to relieve it, but may be helped by slight changes in position. The nurse must be patient and try to get the exact adjustment which will give ease, even though it seems that she is doing the same thing over and over. A movement or a twist of less than a quarter of an inch will often make the difference between agony and comfort.

Compound fractures are those which are complicated with wounds. They are long in healing. They are now usually treated by the Carrel-Dakin method. (See Chapter IX.)

The Bradford Frame.—This is an oblong frame of

metal, with canvas laced on it in one or more sections. It is used chiefly for children, in spinal cases, as restraint, in cases of bed sore, incontinence, etc. For the latter two, or when the bed-pan is to be used, the frame is raised from the bed by blocks.

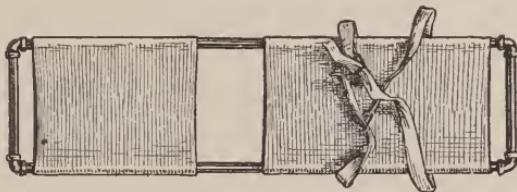


FIG. 47.—Bradford frame.—(Scudder.)

REVIEW QUESTIONS

What **two** sorts of preparation are made for patients who are to have an operation?

Give outline of the routine preparation.

Why should the bowels be well cleared before operation?

Why should the patient drink water freely?

Describe in detail the preparation of the field of operation.

What extent of surface should be prepared for a vaginal operation? An abdominal operation? A stomach operation? A kidney fixation? A breast amputation? A mastoid operation?

What should be the contents of a preparation tray?

Describe the preparation given just before the patient goes to the operating room.

Give details of care while a patient is recovering from an anesthetic.

Give the general care for an abdominal case up to the time of getting out of bed.

Discuss the care given to appendicitis cases, with and without drainage.

What special points are to be observed in the care of cases after stomach operation? After gall-bladder operation? After rectal operations? Bladder operations? Perineorrhaphy? Vaginal hysterectomy? Hernia? Breast amputation? Operation upon skull? Mastoid operation? Removal of tonsils and adenoids? Plastic operation of face? Goitre operation? Amputation of extremity?

Give points in the care of burn cases. Fracture cases.

Tell how the Bradford frame is used.

CHAPTER XVII

SPECIAL DRESSINGS AND OTHER SURGICAL PROCEDURES

"Surgical science, as we know it to-day, is the result of centuries of thought and study as to the best methods."

Demonstrations.—Preparations for dressings. Nurse's duties during dressings. Putting on plaster cast. Catheterization. Bladder irrigation. Care of apparatus for hypodermoclysis.

Many surgical dressings require special knowledge on the part of the nurse, knowledge of anatomy and of technic. No nurse should miss an opportunity to learn new points concerning operative procedures and methods, as they are essential to intelligent assisting with dressings and after-care. The routine ward dressings are comparatively simple procedures, but many cases are more complicated and need special provision made for them. The nurse who has once watched a particular dressing and who understands the principles of it, ought to be able to help a surgeon acceptably with a similar case.

Drained Appendix Cases.—If irrigation is to be done, either with a fountain bag or a piston syringe, turn the patient a little toward the right side, propping him with a pillow put lengthwise under the left shoulder and hip. Usually a Kelly pad will be required, and the patient should be placed on the very edge of the bed, so that the drainage water will run into the jar. If there is a tube in the wound, provide a fresh sterile safety pin to fasten it to the dressings. If there is a wick of gauze, fresh strips will be needed.

Vaginal Dressings.—The patient should have on long stockings or leggings and be placed across the bed, a

low pillow under her head, her hips on a Kelly pad very close to the edge, her feet on two chairs with space enough between them for the surgeon to sit. There should be a good light. If the hips are turned toward the window, the lower part of it should be screened and the light arranged to come from above.

For the *removal of uterine packing* provide a speculum, long dressing forceps, fresh packing (1 inch wide), a fresh vaginal pad, a clean T-binder, and possibly a sound or probe. Irrigation of salt solution may be asked for and a uterine douche tip of glass or metal.

For a dressing after a *vaginal hysterectomy*, there will be needed a pair of uterine dressing forceps, a speculum, and possibly fresh packing, wide or narrow according to the method which has been used in operating.

Amputation.—For dressing the stump where a limb has been amputated, provide the usual articles, and see that the supply of gauze, cotton and roller bandages is unusually large. Protect the bed with a small rubber sheet covered by towels.

Breast Cases.—For these a large amount of dressings are needed, 3-inch roller bandages, and a breast binder. The patient usually lies flat on the back or turned a little to the side.

Mastoid Cases.—These need very small instruments (probe, scissors, and forceps), very narrow packing, small dressings, and 2-inch roller bandages. They are ordinarily dressed in a sitting position, with a towel fastened about the shoulders and another about the head.

At the Close of a Dressing.—Cover the instruments quickly with a towel, put the patient into a comfortable position and cover him, then be ready to push back a screen or open a door for the doctor. Remove all evidences of the dressing promptly to the bath-room, and dispose of them at your leisure.

Economy in the Use of Supplies.—Surgeons are as a rule extravagant in the use of surgical supplies, and

nurses tend to follow their example. Many items are not costly in small amounts but the aggregate of all which may be wasted in even a small hospital amounts to many dollars in the course of a year. If every doctor and every nurse wastes but a few cents worth of material a day, the whole soon becomes a large sum. Waste in any department is not only thriftless and productive of criticism from the public, but may actually deprive the nurse herself of comforts and conveniences which might otherwise have been provided.

In doing dressings, do not prepare more solution than one can reasonably expect to be used.

If a liquid like peroxide, balsam of Peru, tincture of iodine, etc., is to be used from a medicine glass, pour out too little rather than too large a quantity.

If a gauze bandage is not soiled, do not cut it in taking it off, but unwind and roll it up to be used again for that patient. Soiled muslin bandages should be sent to the laundry.

Cotton which has been outside dressings may be used over and over as long as it remains clean and whole.

Gauze dressings which have been on clean wounds and are not soiled by any discharge should be saved and returned for resterilization. Many hospitals now wash all dressings from clean cases, resterilize and use them over and over.

Splints.—In preparing a splint for a fracture case, pad it well with cotton batting (absorbent cotton packs badly and is hard), binding it on neatly with a gauze bandage, having the ends covered and fastened. The doctor is always the judge of the kind and size of a splint to be used.

Plaster Casts.—For putting on a plaster cast there will be needed several plaster bandages of the proper width (2 inches for an arm or ankle, 3 inches for a knee or leg), a deep basin of warm water, a few gauze bandages, and sheet wadding (white) torn or cut into strips and rolled like a bandage. The bed should be protected with a

sheet so placed as to catch all splashing of the plaster. The floor should be protected by newspapers.

The wadding is wrapped around the limb next the skin, or some surgeons use gauze bandages instead. The plaster bandages are put to soak, one at a time, in the warm water; they should be stood on end and squeezed gently while they are soaking, the water being deep enough to entirely cover them. As one bandage is handed to the surgeon, another should be put in. As the cast nears completion, ask if another bandage will be needed, as they are expensive and if wet must be used at once or thrown away.

The sheet which has covered the bed must be promptly rinsed out to remove the plaster from it; any spots of plaster gotten on the floor must be soon wiped off with clear water, or they will be very difficult to remove. Granulated sugar will help in removing plaster from the hands or skin.

Plaster casts are often painted to keep them from absorbing fluids or moisture, and to make them washable.

Removing Casts.—For removing a plaster cast, a strong, stiff knife should be provided, vinegar, and a medicine dropper. The doctor will mark a line where he wishes to cut and the nurse should follow the line with vinegar trickled from the dropper. This softens the plaster and renders it comparatively easy to cut.

Dressings Done by a Nurse.—If the nurse herself is asked to do a dressing, she should make the same preparation that she would for a doctor. A second nurse may be needed for assistance, or she may be able to arrange so as to get on without help. Helping an older nurse with a dressing is an excellent way for a young nurse to learn to assist a doctor.

Disinfecting Hands.—Before beginning a dressing, the hands should be made surgically clean. Roll sleeves half-way to the shoulder, so that the arms may be scrubbed to the elbows. Use green soap, a soft, sterile brush, sterile gauze, and running water. Do not wash

your hands in a basin, as you will simply wash back on them the dirt which has been removed. Soak the hands for a minute in very hot water, to open the pores of the skin and loosen the dirt. Clean the nails with a hardwood stick or a steel file before you begin and again during the scrubbing process.

Begin your scrubbing with the thumb of the left hand, going from that to the forefinger, the middle, third, and little fingers in succession; scrub the palm and the back of the hand and across the nails. Then take the right hand in the same way. Consider that each finger has four sides; give a few strokes of the brush to each side, scrub between the fingers, and go on to the next. Go over each hand in this systematic way, as many times as is necessary; by this means, you may be sure that you have cleansed all parts equally well; if the scrubbing is done haphazard, one portion may be scrubbed fifty times and another only once or twice. A brush should not be used upon the arms, but sterile gauze. Extra time and attention should be given to the nails, as the numerous corners are very difficult to get into thoroughly.

The broad, flat surfaces of the palms and arms are a simple matter to cleanse and need have but little time spent upon them.

Five minutes industrious scrubbing is the least that can be considered proper cleansing. Longer is better. For the operating room many surgeons take twenty minutes.

After thorough, systematic scrubbing with soap, the hands and arms should be well rinsed in running water, and soaked for one minute in a disinfecting solution.

Doing a Dressing.—Follow your doctor's methods. Try to be as deft as possible. Cultivate a light touch, and endeavor to cause as little pain as is consistent with thoroughness. If you watch a skillful surgeon, you will observe that he does more thorough work with far less pain to the patient than a man who is clumsy. Do not, however, let sympathy for the patient interfere with

good work. In cases where there is pus or sloughing, all infected material must be removed if the dressing is to be effective; a dressing imperfectly done might almost as well not be touched.

In all procedures with surgically clean hands, the chief thing to remember is to *keep* the hands clean. This requires drilling, practice, and a mind upon the work. Before you begin, get well into mind just what things you may touch, and studiously avoid all others. Resolve that you will not permit yourself to make breaks in technic. If you touch an unsterile object, go and again scrub your hands. If a sterile article touches something unsterile, boil or discard it. Carelessness in seemingly unimportant details tends to form habits which later become serious matters in the operating room or in obstetric work.

Catheterization.—This is a procedure which should be characterized by the greatest possible care about surgical cleanliness. The mucous membrane of the bladder is easily infected, and the suffering from such an infection is intense. Moreover, when once the bladder has been the seat of an infection, it rarely recovers its normal condition but is sensitive to any irritation which may occur.

In getting ready to catheterize, move the bedside table near enough to be easily reached (it should be at the right side of the bed unless you can work equally well from both sides); set on it a basin of solution for sponging (boric or bichloride 1-5000 are commonly used); put into the solution some sterile cotton sponges; have two catheters, preferably of glass, boiled and left in the boiling basin, set near by; have at hand an open package of sponges in case you need extra ones; see that the light is good and that it falls from below directly upon the vulva.

Prepare the patient by placing her flat upon the back with knees drawn up. Cover each leg separately as for a douche. Protect the chest with an extra blanket,

leaving the lower edge so that it can be pushed up by the elbow. Remove any vaginal dressing. Place on the bed between the patient's thighs a urinal or rather flat basin to receive the urine. If the urine is to be drawn into a sterile bottle, this may be in a basin on the bedside table.

Scrub the hands and arms half-way to the elbows, paying special attention to the nails. Sponge the outside of the vulva wiping always down, toward the rectum. Open the labia gently with the fingers of the left hand and sponge thoroughly, using a fresh sponge for each stroke. Separate the inner labia, and using a sponge made pointed by twisting with the fingers, sponge out the meatus. (The meatus will be found in the flat, triangular space in the anterior vaginal wall about an inch above the vaginal outlet.) Place a small sponge just below it, and with the fingers which hold the labia still in position, pick up the catheter with the right hand and gently insert it. It should slip in with almost no effort; if it does not go in easily, change the direction a little and try again; if any obstruction is encountered, go for experienced help, as damage may be done by attempting to force it. If the catheter should touch the bedding or slip into the vagina lay it aside and take another; if the same thing happens to the second, you must re-boil them before it is safe to proceed.

As soon as the catheter is in the bladder, the urine will begin to flow. You may know when the entire amount has been drawn by the slight sediment or light bits of epithelium which almost invariably appear. If there seems to be more urine in the bladder, push the catheter in slightly or pull it out a trifle. Light pressure over the bladder sometimes aids in emptying it.

When the bladder is empty, put the finger over the open end of the catheter to keep it from dripping, and quickly withdraw it. Sponge about the meatus, remove the receptacle containing the urine, and make the patient comfortable.

Care of Catheters.—Clean catheters by rinsing first with cold and then with hot water from the faucet, boil them for five minutes or longer, and store in a jar of antiseptic solution deep enough to cover them. They should be boiled both before and after use. Rubber catheters should be kept in carbolic solution, as bi-chloride rots them.

Do not catheterize without an order. Try every method to get the patient to urinate, pouring warm water over the vulva, letting water run within hearing, placing hot water in the pan under her, giving a hot drink or even an enema. Sometimes a doctor will allow a patient to sit up to urinate rather than to be catheterized. Patients just out of an anesthetic or newly delivered may have a temporary paralysis of the muscles of the urethra; this disappears in a day or two.

When there are stitches in the perineum, do not permit the patient to urinate until you are sure that her doctor approves.

Remember that a patient may urinate and still not empty the bladder. Dripping or dribbling of urine is often due to an overful bladder which needs catheterization. A very full bladder is better not emptied at once, but should be catheterized two or three times at intervals.

No hospital nurse should catheterize a male patient. In private nursing there may be circumstances when it becomes necessary; in a hospital, however, there is no need, and a nurse is justified in refusing to do it if asked.

Bladder Irrigation.—A quart or more of sterile solution (usually boric) should be provided; it should be comfortably warm, not too hot. The irrigator should be sterile, and should be hung rather low, so that there will be little force to the stream. The end of the tubing should drop into a disinfecting solution.

After catheterization, the tubing is connected with the catheter which remains in place in the urethra, the

shut-off opened, and the warm solution be allowed to run into the bladder. When the patient complains of discomfort, close the shut-off, disconnect the tubing, and allow the solution to run out. The washing should be repeated until the solution returns clear or the prescribed amount has been used.

A two-way catheter also may be used. In this case, care must be taken that the solution does not run in more rapidly than it returns, and if the patient experiences any discomfort, the flow must be stopped until the bladder is nearly empty again.

Hypodermoclysis.—The giving of saline under the skin is usually done by a physician, but the nurse must prepare for it and assist. It is done when the patient needs stimulation, in cases of infection, etc. The apparatus consists of a graduated glass bottle or irrigator to which is connected several feet of tubing ending in a hollow needle. The whole is made sterile by boiling for fifteen minutes or longer. A sterile bath thermometer (without mounting) should be available to test the temperature of the solution. This should be made about 120° in the reservoir, as it cools in running through the tube. Green soap, sterile sponges, and alcohol should be at hand for scrubbing the skin where the needle is to be inserted. This scrubbing is done by the nurse, and should be thorough. A sponge wet with alcohol is laid over the place until the doctor is ready to insert the needle. The chest wall, either in the back, side, or just below or just above the breast, is chosen. About a pint may be given in one place, and if more is required, a new spot is selected. Gentle rubbing may be used to hasten absorption of the solution. The wound made by the needle is sealed with collodion and a tiny wisp of sterile cotton.

After use, the apparatus should be rinsed and resterilized, wrapped so that it may be ready upon short notice. The needle should be boiled, rinsed in alcohol to prevent rusting, and put away with a wire in it.

In extreme cases, where quick action is necessary, a large glass syringe may be used instead of the bottle or irrigator, fitting its point into a very short tube attached to the needle.



FIG. 48.—Giving salt solution under the skin. Hypodermoclysis.

Salvarsan.—The apparatus and preparation for giving salvarsan is very similar to that used for hypodermoclysis. A tourniquet (rubber tubing about 18 inches long) will be required, materials for cleansing the skin, a

sterile, graduated irrigator (small), a sterile graduate glass, dressings, sponges, and sterile towels.

The patient lies flat, the inside of the bend of the elbow is exposed and scrubbed or painted with iodin, and the tourniquet is applied so as to impede—not check—the venous circulation. The salvarsan solution may be ready prepared in a serum syringe, or it may have to be mixed with saline in the sterile graduate and dissolved.

The salvarsan solution is allowed to flow through a special needle which is inserted in a vein. The doctor who gives the treatment works with sterile hands, but the assisting nurse is usually unsterile.

Saline Given Intravenously.—Salt solution may be given intravenously. The technic is the same as that of giving salvarsan.

Blood Transfusion.—The transference of blood from one person to another is done for patients who have had severe hemorrhages and in some cases of anemia or certain infections. It is important that the blood of the donor "match" that of the recipient; for this reason near relatives are chosen, if they are in robust health.

The *direct* method, that of joining the radial artery of the donor to a vein in the arm of the recipient with a short piece of tubing and permitting the blood to flow from one to the other, is now rarely employed. The *indirect* method is more satisfactory. It consists in removing the requisite amount of blood from a vein, usually one in the arm, of the donor, diluting it with 0.2 per cent. of sodium citrate, in solution, to prevent its coagulating, and introducing it, by means of a salvarsan or hypodermoclysis apparatus, or even by a glass syringe, into a vein opened in the arm of the patient. The procedure is done by a surgeon, with sterile hands. All the apparatus must be well sterilized and kept sterile. The arm must be prepared as for a surgical procedure, and small dressings and bandages be ready at the close. The amount of sodium citrate solution used must be carefully measured.

REVIEW QUESTIONS

Tell how to prepare for dressing a drained appendix case.

Give special points in dressing vaginal cases. Amputations. Breast cases. Mastoid cases.

Give points to be observed in the economical use of surgical supplies.

How do you prepare a splint?

What is needed for putting on a plaster cast? How may plaster be removed from the hands?

What is needed for the removal of a plaster cast?

Give in detail the process of hand scrubbing and disinfection.

Give points upon doing a surgical dressing.

Give in detail the process of catheterization. Give special points concerning catheterization.

How is bladder irrigation done?

Give the technic of hypodermoclysis. How should the apparatus be cared for?

Tell how salvarsan is given.

When is blood transfusion done? Give points in its technic.

CHAPTER XVIII

BANDAGING

"It is not so necessary to keep to a prescribed figure as to have the bandage put on smoothly, evenly, and firmly."

Demonstrations.—Rolling bandages. Putting on the various sorts of triangular and roller bandages.

Bandages are used (1) to keep dressings in place, (2) to give support, (3) to apply pressure, (4) to prevent motion.

Kinds of Bandages.—The bandages in common use are the *roller*, the *many-tailed*, and the *triangular* (or handkerchief) bandage.

The proper putting on of a bandage requires a degree of skill which is attained only after considerable practice. A properly applied bandage should be neither too tight nor too loose, and should remain in place for twenty-four hours without readjustment while the patient is moving about in a normal manner.

An uncomfortable bandage is not properly applied.

A bandage which slips out of place with ordinary movements is not properly applied.

A neat-looking bandage is not necessarily well put on. Firmness should not be sacrificed to appearance.

Triangular Bandage.—This is made from a square of muslin, folded diagonally. It may be large or small, according to the use to which it is to be put.

Arm Sling.—The triangular bandage should be put on with the point at the elbow, the fold at the wrist, and the two ends each side of the neck, tying at the back. The point should be folded under neatly and pinned. The

bandage should hold the arm high enough to support the forearm and hand, but not enough to be uncomfortable.

Triangular Scalp Bandage.—The triangular bandage may be used to cover the head, putting it on bandana-fashion. The fold comes across the forehead, the point at the back of the neck, the ends are crossed in the back, brought around the head and tied in front. If the point is too long it may be turned over and pinned neatly to the part covering the head.

The Many-tailed Bandage.—This may be used as an abdominal binder, the corresponding tails on each side



FIG. 49.—Three-cornered bandage for arm.—(Stoney.)

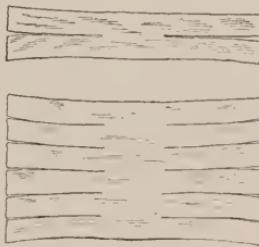


FIG. 50.—Four-tailed and many-tailed bandages.—(Stoney.)

being brought to the front and lapped over each other, the next two over these, etc.

The Scultetus Bandage.—This is a modification of the many-tailed abdominal bandage. In it the edges of the tails overlap, making a firmer, more easily adjusted bandage, and one which stays in place better. It is usually made with perineal straps to come between the thighs and fasten in front.

The Four-tailed Bandage.—This may be used to cover the knee or elbow, the center being put over the point of the elbow or the knee-cap, the tails brought around and crossed, brought back again and tied, the upper ends above, the lower ones below the joint.

The four-tailed bandage may be used for the eyes by making the tails narrow (cutting out between them).

Put the center of the bandage over the eyes, let the two upper tails go over the ears and the two lower ones below, tying both sets at the back of the neck.

Roller Bandages.—These should be too narrow rather than too wide for the part to which they are to be applied. Finger bandages should be $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, hand bandages should be an inch; foot, leg, arm, and head bandages, 2 inches; shoulder and thigh bandages, $2\frac{1}{2}$ or 3 inches; body bandages may be 4 to 8 inches wide.

In putting on a roller bandage, keep the roll close to the part, and unwind no faster than is necessary.



FIG. 51.—Scultetus bandage.—
(*Stoney.*)



FIG. 52.—Cataract bandage.

In taking off a roller bandage, gather it up into the hand and carry it around the limb.

Begin bandaging at the part farthest away from the body, *i.e.*, with a leg, at the foot or ankle; with an arm, at the hand or wrist.

Wind two turns around the limb to prevent the end from slipping, when you begin.

Let each turn of the bandage overlap two-thirds of the previous one, so that there will be three thicknesses of bandage covering any part. More turns than this may be used, but not fewer.

Leave finger-tips and toes uncovered. If they become blue, the bandage is interfering with the circulation and must be loosened.

Try to make the bandage firm, yet not tight. Endeavor to have it afford even pressure, so that it shall not be loose at one place and cut into the flesh at another.

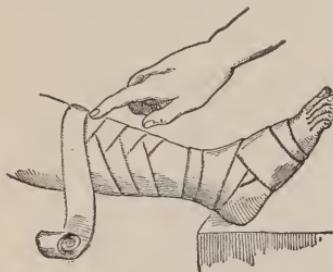


FIG. 53.—Bandaging a leg, showing method of reversing the bandage.—(Stoney.)

Have the part to be bandaged held in the position in which it is to be kept. The arm should usually be bandaged with the elbow bent.

The Spiral Bandage.—This goes round and round a



FIG. 54.—Spiral reversed bandage of the upper extremity.—(DaCosta.)

limb, each turn being a little higher than the previous one. In order to make a spiral bandage fit, one must use *reverses*. These are made by placing the thumb or finger firmly on the bandage as you turn it over obliquely; this changes its direction and brings the other side out.



FIG. 55.—Crossed figure-of-eight bandage of both eyes.—(DaCosta.)



FIG. 56.—Figure-of-eight bandage of the instep.—(DaCosta.)

Reverses should not be made over a bony prominence; they are best at the outer side or back of a limb.

The Figure-of-eight.—This is used in bandaging a joint. The bandage is wound alternately above and below the joint, going obliquely across the joint under-

neath. If properly put on, the joint may be moved quite freely without disarranging the bandage. This is used on the foot, hand, ankle, knee, elbow, groin, shoulder, eye, and head. The shoulder, groin, and thumb figure-of-eight bandage is called a *spica*.

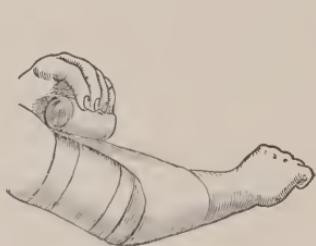


FIG. 57.—Figure-of-eight bandage of the elbow.—(DaCosta.)

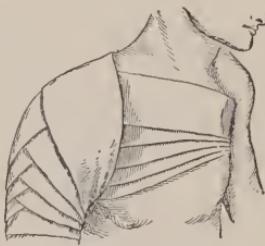


FIG. 58.—Spica of the shoulder.—(DaCosta.)

Finishing a Bandage.—The end of a roller bandage may be turned smoothly under and fastened with a small safety pin; or it may be split for several inches, the ends wound in opposite directions about the limb and tied in a bow-knot.



FIG. 59.—Spica of the groin.—(DaCosta.)



FIG. 60.—Spica of the thumb.—(DaCosta.)

Do not use a bandage which is wet or damp. It will shrink upon drying and be too tight.

Summary of Points.—In starting, fix the bandage by two turns around the limb.

Bandage from below upward and from the extremity toward the body.

Let each turn of the bandage overlap the previous one two-thirds.

Do not unroll the bandage more rapidly than is necessary.

Apply the bandage evenly, firmly, and not too tightly. It should be comfortable and afford support.

Leave the tips of the fingers and the toes uncovered.

Do not use a wet bandage.

Do not let reverses come over a bony prominence.

Use the figure-of-eight in bandaging a joint.

In removing a roller bandage, gather it up into the hand and carry it around the limb.

REVIEW QUESTIONS

For what are bandages used?

Name three common sorts of bandage.

Give general points on applying bandages.

Describe the triangular bandage. Tell how to use it for an arm sling. For a scalp bandage.

How may the many-tailed bandage be used as an abdominal binder?

Describe the Scultetus bandage. Of what advantage is it?

Tell how to apply a four-tailed bandage to the knee or elbow. To the eyes.

Give the correct width of roller bandage for each part of the body.

Give ten points upon the application of bandages and discuss each.

CHAPTER XIX

GYNECOLOGICAL NURSING

“I believe that the one who recognizes the complexity of woman’s nervous organization and appreciates its tyranny will touch her well-being at more points and with a keener perception of its wants than any other person.”

Demonstrations.—Review preparation for pelvic examination.

Much of the work in our modern hospitals deals with diseased conditions peculiar to women. To ensure success in this work, special training is needed and special attention must be given. A woman with pelvic trouble usually means a nervous woman; many times she is one who has suffered for years, and who comes to the hospital and to operation as a last resort. She may be the conscious victim of another’s sin, bearing the wrong bravely. She usually knows that ahead of her is suffering as well as behind, and she bears her trials well or ill according to temperament and training.

The nurse who does gynecological work must bear these things in mind, for ready sympathy and cheery patience have as much to do with her success as have thoroughness and knowledge of what she is to do. For this woman may be needed a bit of stoic philosophy or a reminder of the virtue of heroism; while for the other soothing and petting or a chance to cry may be appropriate. They will all need infinite patience, given without cynicism.

Gonorrhreal Patients.—A large percentage of gynecological troubles are due to gonorrhreal infection. Nurses should be aware of this, and should be prepared, even

if not specifically told, to take precautions against infecting themselves or other patients under their care. In any case where there is a vaginitis (inflammatory condition) or an excessive vaginal discharge it is wisest to proceed as though there were an infection. Separate bed and douche pans should be kept for these patients. The nurse should avoid handling their vaginal pads, or getting any fresh or dried discharge upon her hands. She should scrub and disinfect her hands after handling or giving any treatment.

It may be noted that the gonococcus does not thrive outside the human body, and that it dies within a few hours if left exposed. This affords one of our chief protections against this infection. These germs most readily attack mucous membranes, the eye being specially susceptible, and for this reason a nurse should never rub her eyes nor even put her hands to her face while caring for a gonorrhreal case. The danger of infection from a public toilet has been somewhat exaggerated, as the vaginal mucous membrane is furnished with cilia which propel all substances outward, and the natural vaginal secretion has germicidal properties. Germs gotten upon the clothing or skin would be unlikely to find a lodging where they could do harm.

The chief things for a nurse to guard against are the infection of her own eyes and the possibility of carrying the germs to other patients upon her hands or upon apparatus.

The Fallopian tubes are most often the seat of trouble due to gonorrhreal infection. It sooner or later involves the ovaries and uterus, causing inflammation, displacement, etc. Usually the tubes must be removed by abdominal section, and any other troubles are corrected at the same time.

Pelvic Operations.—Many of the operations done upon women involve the removal of an organ which, because of its infection and consequent inflammation, has become so altered as to be useless or a menace to the

patient's health. Operation may afford a means of stopping the infection.

When attention is called to it, one can readily understand that the removal of an organ is likely to be accompanied by a certain amount of shock to the nervous system. If the nerves have been weakened by a long period of disability, it will take the patient some time to regain her former strength and tone. Gynecological patients frequently become discouraged because of the slowness of their recovery; the nurse may explain to them that recovery from a disease of long standing cannot be rapid, and that they must expect it to take some months. Often a marked betterment is not observed until the second year after operation.

Removal of both ovaries is commonly followed by nervous symptoms similar to those which accompany the menopause ("change of life"). The patient should be encouraged to bear them as best she may, knowing that they will disappear after a time. Removal of one ovary usually occasions no special disturbance.

Pelvic Disorders.—*Salpingitis* is an inflammation of the Fallopian tube.

Pyosalpinx is a collection of pus in the Fallopian tube.

Hydrosalpinx is a collection of watery fluid in the tube.

Ovaritis is inflammation of the ovary.

Ovarian tumors are usually cystic (containing fluid). Their origin is obscure, but they are not ordinarily due to infection.

Uterine Disorders.—The principal uterine troubles which we encounter are (1) displacements; (2) inflammation from gonorrhreal infection; (3) infection from produced abortions; (4) tumors, either benign (not injurious to the general health), or malignant (cancerous).

Displacements may be forward (anteversion or anteflexion), against the bladder; or backward (retroversion or retroflexion), against the rectum.

Endometritis is inflammation of the lining membrane of the uterus.

Metritis is inflammation of the muscle (the body) of the uterus.

Tumors.—Some of the commoner sorts of tumor are the fibroid, the myoma, and the cancerous or malignant. Fibroids and myomata are not dangerous to life and in many instances do not affect the health until they have grown so large as to cause pressure upon other organs. Malignant tumors are fatal if allowed to remain; they should be removed very early to prevent recurrence.

A *fibroid* tumor of the uterus is caused by the development of fibrous tissue in the body of the uterus, the organ becoming larger than normal. In many instances its presence is not suspected until hemorrhage occurs; the hemorrhages can only be stopped by removal of the tumor.

A *myoma* of the uterus is a muscular tumor. Both fibroid and myomata may be small nodules or may affect the whole body of the organ.

A *malignant tumor* is often the result of old lacerations of the cervix. There may be foul discharge or hemorrhage, and in the latter stages there is severe pain. If operated early, only the cervix may need to be removed, but later the whole uterus must be extirpated. In neglected cases, the disease may extend into the bladder, rectum, or vaginal walls; when this occurs, operation may be done for relief, but the condition is incurable.

A *fistula* is an abnormal opening in the tissues. In gynecology it is usually the result of a laceration which did not heal. A *vesico-vaginal* fistula is an opening in the wall between the bladder and vagina, permitting the urine to escape. A *recto-vaginal* fistula is an opening in the wall between the rectum and vagina, allowing fecal matter to be pressed through.

Kinds of Pelvic Operations.—*Salpingectomy* is the removal of the Fallopian tube.

Ovariectomy and *oophorectomy* mean the removal of an ovary. Ovariectomy is usually applied to the removal of a large tumor.

Salpingo-oophorectomy signifies the removal of both tube and ovary.

Curettage is a scraping of the lining membrane of the uterus. It is done to remove infectious, decomposing, or inflammatory material.

Dilatation of the mouth of the womb (os uteri) is done as a preliminary to curettage, for the relief of painful menstruation (dysmenorrhea), or with a view to overcoming sterility.

Uterine displacements may be held in place temporarily by means of *tampons* or *pessaries*. Pregnancy cures a certain number of cases. Most of them, however, must eventually be corrected by operation. There are several different operations done for displacement, most of them being some sort of shortening of the ligaments which hold the uterus in position. Or, the body of the uterus may be fastened to or suspended from the abdominal wall. Sometimes repair of the perineum is necessary to afford support from below.

Uterine infections and inflammations are treated by local applications, vaginal tampons, applications made to the inside of the uterus, or by curettage.

Suspension of the Uterus.—This is the fastening of the uterus to the abdominal wall. It may be done solidly (ventro-fixation) or loosely (ventro-suspension).

Round-Ligament Operations.—These are done for shortening the ligaments which hold the uterus, thus correcting displacements. They are usually done through an abdominal incision.

Perineorrhaphy.—This is repair of the perineum, the body of muscle between the vagina and rectum. Lacerations more or less extensive occur in it during childbirth. If the tear extends into the rectum, it is called a *complete laceration*.

Amputation of the cervix (neck of the uterus) is done

because of extensive lacerations at childbirth or on account of a beginning malignant condition. It is done vaginally. .

Hysterectomy.—This is removal of the uterus. The body only may be removed and the cervix left, or the whole organ may be excised. It may be done through an abdominal incision, or if the uterus is not much enlarged, by the vagina. When tubes and ovaries are removed at the same time the operation is termed a *complete hysterectomy*.

Repair of a Fistula.—This operation requires considerable skill on the part of the surgeon, but its success depends chiefly upon the after-care. If the fistula was in the bladder wall, a retention-catheter is placed and must be kept draining in order that proper healing may take place. If it was in the rectal wall, thorough purging beforehand and careful feeding afterward (with food containing little or no residuum) postpones a bowel movement as long as possible; when it does occur, precaution must be taken, by oil or other enemata, to have the feces soft or liquid, so that there shall be no straining and tearing of the stitches. These cases must be kept scrupulously clean, as any foreign matter getting on or among the stitches is likely to cause infection and consequent sloughing. A young nurse ought not to take the responsibility of a fistula case.

Tampons. Pessaries.—Tampons are small pieces of absorbent cotton with about 6 inches of string firmly attached. They are used in applying medication to the cervix or mouth of the uterus. The string extends outside the vagina so that the tampon may be removed by the patient herself.

Pessaries are firm instruments of various shapes, made usually of hard rubber, placed in the vagina for support to a displaced uterus. They are sterilized by soaking in a disinfecting solution.

Tampons and pessaries are rarely seen in hospital practice, except in the out-patient department.

REVIEW QUESTIONS

Discuss the importance of gynecological nursing.

Give the precautions necessary in handling cases of gonorrhreal infection.

What facts assist us in avoiding danger from infection by these cases? What is the chief danger in caring for them?

Do gynecological patients make rapid recoveries, and why?

Define salpingitis. Pyosalpinx. Hydrosalpinx. Ovaritis.

Name the four kinds of uterine troubles.

Define endometritis. Metritis.

Name and describe three sorts of tumors.

What is a fistula? Name two sorts of fistula.

Define salpingectomy; ovariotomy; oophorectomy; salpingo-oophorectomy; curettage.

How are uterine displacements corrected?

What is a perineorrhaphy?

What is hysterectomy? Complete hysterectomy?

Give important points in the after-care of a fistula case.

What are tampons? Pessaries?

CHAPTER XX

CARE OF BABIES

"In infancy the surroundings and the personal attentions are of greater value than at any other time of life."

Demonstrations.—Baby's bath. Dressing the cord. Dressing baby. Lifting and carrying. Putting to nurse. Care of nursing bottles.

A new-born baby should have little handling but careful watching.

Even after breathing seems well established, the child should be looked at every few minutes for the first half-hour, and every fifteen minutes for the next few hours. A baby which is not quite in good condition may suddenly stop breathing or collapse at any time during the first few hours of its life.

For the first twenty-four hours keep the baby lying on its right side. This is done to make sure that the foramen ovale, the valve which before birth exists between the right and left sides of the heart, may close and remain so. Failure in this produces a "blue baby," the arterial and venous blood mixing and interfering with proper circulation and oxygenation.

As soon as the child is born, it should be wrapped in a sterile towel, care being taken to protect the cord, then in a soft, warm, washable blanket, with a hot water bag (not too hot) outside it. A small opening should be left near the face for air. As soon as one has the time, anoint the baby all over with sterile oil or white vaseline, putting a liberal quantity in the groins, under the arms, around the neck, and on the head, wherever there is an accumulation of vernix caseosa (the white,

cheesy-looking material which is found upon the skin at birth). Leave this on for half an hour or more, when the baby may be washed clean with white soap and water.

The First Bath.—There is no need of haste about giving a baby's first bath. The nervous shock of handling and the discomfort of clothing can as well be postponed for a few hours providing the baby is kept warm and is in good condition. This first bath, and all baths given before the cord is off and the navel healed, should be sponge baths. The exception to this is in case of sudden collapse or faulty breathing, when a warm plunge or a mustard bath may be given for the stimulating effect.

The Cord and Navel.—These should be treated like an open wound. Whether gauze or cotton is used as a dressing, it should be sterile, and the parts should not be touched except with surgically clean hands. Powder or ointment may be used upon the navel if ordered by the physician or head nurse. Talcum powder (sterilized), starch, zinc oxide, aristol, and other powders are used; also castor oil, zinc oxide ointment, balsam of Peru, etc. The dressing should be kept dry. It need not be changed each day, but should be inspected, and if the navel is wet or red, the fact should be reported.

The Band.—This should not be put on too tightly. It is not designed to support the abdominal wall, but simply to keep it warm and to hold the cord dressing in place. A band which is too tight may cause indigestion or regurgitation of food. The band should not be pinned, but basted on, always remembering to insert a finger between it and the skin.

When the cord drops off, ordinarily from the fifth to the fifteenth day, continue the dressings as before until the navel is well healed. If there should be any bleeding or moisture upon the surface from which the cord has separated, call the doctor's attention to it.

Hemorrhages.—Remember that any bleeding in a new-born baby, however slight, is a serious matter and

should be promptly reported. Hemorrhages from the cord, from the mouth, stomach, intestines, etc., all occur more or less frequently. Some babies cannot lose a dram of blood without alarming symptoms; others will bear the loss of a larger quantity, but it is not wise to take chances.

Dressing the Baby.—It will be found more convenient to dress and undress a baby lying on a padded table. The child may be rolled from side to side instead of being lifted, making less handling necessary.

The usual clothing consists of band, shirt, stockings or bootees, diaper, pinning-blanket, petticoat and slip. The pinning-blanket is not needed if warm stockings are worn, and in hot weather the petticoat may be dispensed with. The tendency is always to clothe babies too warmly rather than too lightly. Very long skirts and heavy wrappings should not be used; they drag and annoy the baby by their weight, and cause perspiration and consequent chilling. In dressing a baby, the skirts and dresses should be put on over the feet, not over the head.

Changing Position.—After the first twenty-four hours a baby should be turned often from one side to the other. A healthy baby sleeps twenty to twenty-two hours out of the twenty-four at the first, but becomes tired and uncomfortable from long lying in one position.

Fresh Air and Light.—The crib should be in a room containing fresh outdoor air and sunshine, but should be screened from drafts and bright light. A light should never be allowed to shine directly into a baby's face.

Lifting.—In lifting a baby, make it a point to support the head and upper part of the spine. Put one hand under the back of the neck and with the other grasp the clothing about the feet. Never lift a baby by its arms.

Carrying.—A baby is carried with greater comfort to it and greater ease to the nurse if it be laid face downward over the right hip. This affords freedom for the legs and arms, enables the baby to see, and leaves the

nurse with her left hand available for opening doors, etc. It is far better than the old-fashioned cramped position in the arms.

Noises.—During the early weeks of its life, a baby is not disturbed by noises, no matter how loud, unless



FIG. 62.—How to lift baby.

they are accompanied by jarring. Care should be taken, however, about allowing doors to slam, heavy articles to be dropped, etc. Older babies are disturbed by noise and should be put to sleep in a quiet room.

Weighing.—A baby should be weighed daily for the first six or eight weeks; after that if the child is doing well once a week for six months; then once a month or often enough to be sure that it is gaining properly. The weighing should be done in a padded basket which should exactly balance when empty. The child should be weighed without clothing or with exactly the same clothing each time. Effort should be made to have the baby quiet when it is being weighed, as kicking or crying make it difficult to be accurate.

A weight chart should be kept for each baby, as it shows better than figures the trend of the child's nutrition.

Loss and Gain in Weight.—Babies lose weight rapidly during the first few days of life, the average amount being nearly a pound. This loss is due to evaporation (before birth the child lives in a sack of fluid), to elimination, and to lack of food. After the mother's milk comes in freely and the baby begins to nurse regularly there should be a steady gain in weight. The weight at birth should be regained in ten days or two weeks. As long as the weight chart shows an increase, however slight, there is no occasion for anxiety; but a continued loss in weight or a failure to gain for several days in succession should be considered a danger-signal.

Nursing.—For the first two days, or until the milk appears, the baby may be put to the breast every four hours during the day and not at all at night if it sleeps. The first secretion of the breast (colostrum) is laxative and assists in expelling the *meconium* which has accumulated in the intestines before birth. While the child gets little nourishment from the first milk, it is important that the nursing habit be established.

After the mother's breasts fill, the nursing schedule should be every two hours during the day, and every four hours during the night. The child should be wakened for nursing during the day, at least up to 8 or 9 p. m.; after that it should be allowed to sleep and should

be nursed during the night only if it wakes of its own accord.

If after good trial a baby cannot be wakened for nursing, it may be allowed to go until the next nursing time comes round. Every effort should be made, however, to have it waken and nurse on time. Regular habits must be established during the first few weeks or endless trouble will result later on. The routine of the first few weeks is sure to set the pace for months thereafter. If a baby is allowed to sleep during the day and miss its regular nursing time, it is sure to be hungry and cry at night. If it is allowed to nurse at irregular intervals, is bathed at any hour of the day, is wakened to be shown off to visitors, etc., small wonder if it is troublesome; it has not only acquired unsystematic habits, but is likely to be nervous, have poor digestion, and other troubles.

A baby should not be wakened for anything except food. The nurse must not allow visitors to take up or handle a sleeping baby.

Difficulty about getting a baby to nurse may be due to its having been placed in an awkward position. The mother should lie on her side and the child be supported by her arm or by a thin pillow in such a position that its mouth shall be squarely in front of the nipple. The mother should support the breast with her hand and hold the nipple so that the baby may be able to get and retain its grasp.

The nipple and vicinity should be washed before each nursing with boric solution. The baby's mouth should also be washed thoroughly but gently with the same solution, using a bit of cotton or soft linen twisted around the finger. Do not use gauze, as it is too rough for the tender membrane.

If the mother has flat or retracted nipples, or they become sore, a shield may be used for the baby to nurse through. The shield should be rinsed well and scrubbed

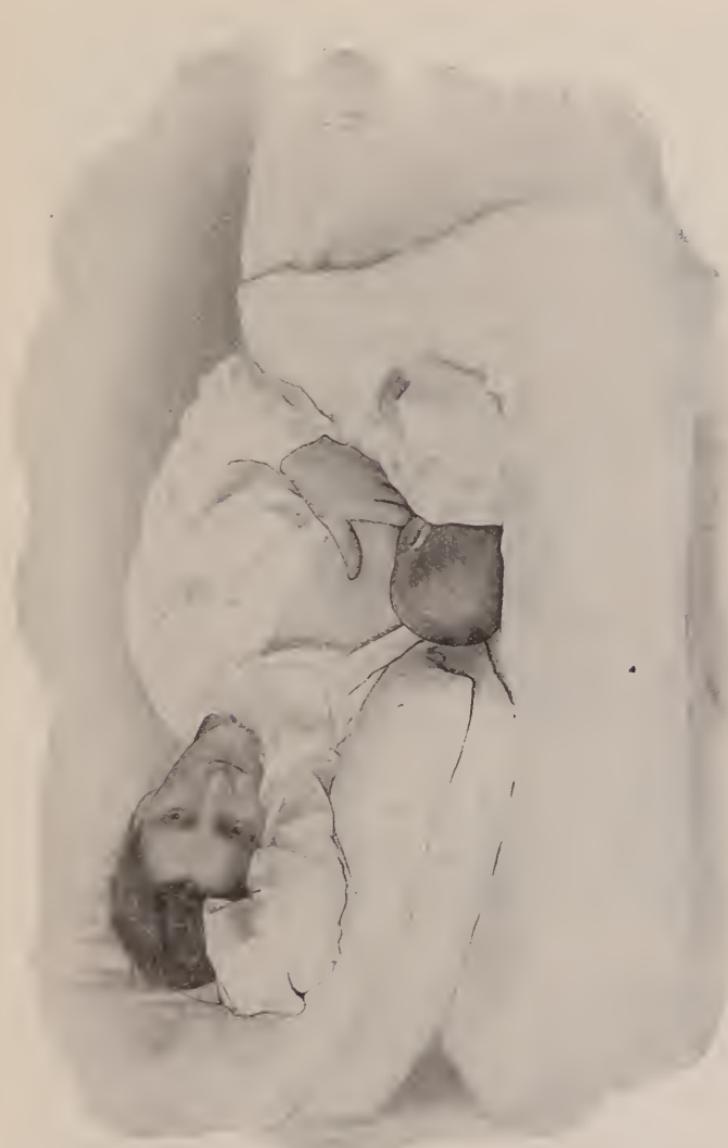


FIG. 63.—Woman in proper position for nursing an infant.—(DeLee.)

after each nursing and kept in a solution of boric acid; it should be boiled at least once a day.

Artificial Feeding.—If for any reason the mother is unable to nurse her child, and artificial feeding has to be resorted to, every care must be taken in the preparation



FIG. 64.—Holding baby and nursing bottle.

and handling of the food. The physician will write out a formula, and it should be followed with the utmost exactness. The nurse's hands should be well scrubbed, the measuring done with surgically clean dishes, and all utensils boiled daily. It is customary to prepare at one time enough food for twenty-four hours and keep it on ice. The best way, if at all practicable, is to put up in

small bottles the requisite number of feedings, corking each with sterile cotton. Each bottle then needs only to be warmed by placing it in a deep basin of hot water.

In feeding a baby from a bottle, do not leave the child alone in its crib. Even if a wire bottle holder is used, the baby is apt to move or the bottle slip, the milk run too fast or too slowly. The baby should lie in the nurse's lap and the bottle be held at such an angle that the contents will flow properly and continuously; or the child may be left in the crib and the nurse sit beside it and hold the bottle. If the nurse lacks time, the mother may attend to the feeding. Wrap the bottle so that it shall remain warm till all the milk is taken. A flannel or knitted woolen cover made to fit the bottle is a convenience.

Care of Nursing Bottles.—The nursing bottle should be washed immediately after it is emptied, as if milk is allowed to dry on, it becomes very difficult to get clean. Nursing bottles should be boiled daily. The rubber nipples should be rinsed immediately after being used, turned, scrubbed and boiled before being used again. They may be kept in boric solution until needed. If bottles and nipples are not perfectly clean, they may cause the food to disagree.

In nursing either from a bottle or from the breast, the baby should not be allowed to eat too rapidly. Twenty minutes should be taken for one feeding, and in any event not less than fifteen minutes. If the child is allowed to eat faster than this, the stomach becomes overful and the food is apt to be regurgitated. This is not only annoying, but deprives the baby of a portion of its nourishment. With a young baby, vomiting always means that too much food has been taken or that the feeding has been done too rapidly. It is not vomiting in the strict sense of the term, but simple regurgitation.

Colic.—This is commonly caused by unsuitable food, but may be due to too rapid or too frequent feeding. If food be given in too great a quantity for the digestive

organs to take care of, or if it is of such a nature that this particular child cannot digest it, fermentation takes place and gas is formed, producing the pain which we call colic.

The best remedy for colic is *heat*. Warm water to drink and a hot water bag applied to the abdomen are usually effective. In some stubborn cases, a hot bath may be given with good results. Gentle rubbing of the abdomen may help. An enema sometimes affords immediate relief.

Colic medicines, even the simplest, should never be given without an order from the doctor or head nurse. As a rule a nurse should not report colic until she has applied heat externally and internally and has given an enema. Mothers should be warned against the so-called soothing syrups, as they nearly always contain opium and are very dangerous.

If a baby has persistent colic and the bowel movements are not normal, the matter should be reported to the physician, as it is likely that a change of food is needed.

Changing.—The diaper should be changed as often as it becomes wet or soiled, unless the baby is nursing or sleeping very soundly. If it is allowed to remain wet for a long time, the skin becomes irritated and sore. If only wet, diapers should be immediately rinsed out in warm water; they may be used again once or twice; they should, however, be laundered every two or three days. Soiled diapers should have the fecal matter rinsed off (holding in the bowl of the toilet while it is being flushed is a convenient way) and be put to soak in clear water until they can be sent to the laundry. Soiled napkins should not be left in the patient's room.

Bowel Movements.—A baby's first bowel movements are a black or dark green material called *meconium*. It is important that this begin to come away during the first twenty-four hours; if necessary, an enema may be given. After the first few days, the bowel movements

are of a bright yellow, soft, unformed, and with very little odor; tiny white curds may appear, but are not abnormal. A formed bowel movement, a watery one, green discharges, hard, white, undigested curds, brownish or grey stools, froth or mucus, all indicate impairment of the digestion, and should be shown to the physician.

Urine.—The first urine passed may be reddish in color and may even be mistaken for blood; this is due to a sort of "brick-dust" sediment and if the baby is given plenty of water to drink will disappear. After the first few days, the urine should be almost colorless and odorless.

Jaundice.—This occurs during the first week in about 50 per cent. of children. It is due to inactivity of the liver. It requires no treatment, as it usually takes care of itself.

Rashes.—These are common in young babies, but seem rarely to occasion any special discomfort. They may be due to clothing which irritates or to the child's being kept too warm. The application of white vaseline or zinc oxide ointment and bathing in a solution of baking soda usually clears them up.

Crying.—It may be stated as a principle that young babies do not cry without good reason. There may be no reason apparent to the nurse, but that means simply that she is unintelligent or inexperienced. Older babies may cry from temper, to be taken up, etc., but a young baby has not yet learned these things. Its cry is a signal of physical discomfort, and it is the business of the nurse to find the trouble and remedy it.

A baby should not be taken up when it cries. On the other hand, it should not be allowed to cry for any length of time without attention. The one extreme is as bad as the other. When a baby cries, go immediately to it, and see if it is uncomfortable from being wet or soiled, from lying too long in one position, or from wrinkled or twisted clothing. A safety pin which is too large or too near the skin may be pressing upon it.

(Remember that a safety pin 2 inches long is equivalent to one 6 inches long for an adult.) The child may be thirsty, and a drink of warm water may satisfy it. The feet may be cold and cause colic. These items account for a large share of the crying of young babies.

If a baby is taken up when it cries, tossed about, and one thing after another tried in quick succession without giving time for an effect, "anything to stop the crying" being the sole idea, the work is well-nigh useless, as the nurse is not likely in the end to know what the real trouble was or what helped it. If she will, on the other hand, sit by the crib, spend a little time in systematically trying various remedies and watch the result, noting the baby's manner and expression, the character of its cry and what influences it, she will do more for the baby and more for herself than she could by spending hours in aimless, unthinking work.

Kind of Cry.—*The cry of hunger* (or thirst) is a continuous, persistent cry, unvarying in quality. If a baby habitually wakes and cries a little before its nursing time, it may be assumed that the child is not getting enough food even though it may seem well-nourished and be gaining in weight. It may take but a small additional quantity to satisfy, but that little is important.

The cry of pain is sharp, vigorous, and intermittent. If from colic, it is usually accompanied by kicking or sudden drawing up of the legs; a novice may easily mistake this for temper. If the legs are kept straight, the spine rigid and the head drawn back, the pain may be that of meningitis. Pain in the head or ear may cause the child, if it is old enough, to put its hand to its head or to rub the head against the pillow; a young baby cannot, however, do these things.

A low, whining cry, whether continuous or intermittent, indicates general poor condition. It may not mean actual suffering, but only discomfort, yet it is an ominous symptom.

Any unusual sort of cry should be reported.

REVIEW QUESTIONS

What special watching does a new-born baby require?

What should be the first care given a baby?

How are the cord and navel to be taken care of?

What is the use of the baby's abdominal band? How should it be adjusted?

What hemorrhages may a new-born baby have? Are they important?

What clothing should a young baby wear?

Give points about changing a baby's position. Give points on light and air. What care should be taken about noises?

How often should a baby be weighed?

How should a baby be lifted? How carried?

How much weight does a baby lose at first? Why? When is this loss regained?

Give the nursing schedule for the first few days. The schedule after the mother's milk is established.

Discuss the importance of regular habits for a baby.

Give points on washing the mother's nipples. The baby's mouth.

For what is a nipple shield used?

Give points to be observed in preparing artificial food for a baby.

Give points to be observed in feeding a baby from a bottle.

Give in detail the care of nursing bottles and nipples.

What is colic? What is the cause of it?

What is the proper treatment for colic?

Tell how to care for diapers.

Describe the normal bowel movement of a young baby. What sort of stools are abnormal?

To what is jaundice in a young baby due? What treatment does it require?

To what are skin eruptions or rashes usually due? What treatment may be given for them?

Why do babies cry?

What may be done for a crying baby?

What is the cry of hunger? The cry of pain?

What is the meaning of a low, whining cry?

CHAPTER XXI

OBSTETRICS

“The woman about to perform the highest function of the race, at the most endearing and crucial moment of her life, should enjoy the greatest benefit, the finest art, that the science of medicine affords.”

Bedside Clinics.—The uterus in freshly delivered patients. En-gorged breasts. Application of abdominal and breast binders. Massage of breasts.

No young nurse should take the responsibility of preparing for or rendering important assistance at a delivery; but very frequently two or three nurses are needed and a young nurse may be called upon to be present at an obstetric case. She should know how to do the simpler things connected with this work, especially *what not to do*.

Night nurses who are inexperienced in obstetrical work should see that they do not put themselves in a position to play an important part in a delivery. The nurse who has charge of those cases should be notified early enough to afford time for proper preparation.

Precipitate Labor.—If a young nurse finds herself with a case of precipitate labor on her hands, with no time for the preparation of room or patient, and the baby about to be born, she should remember that her duties are these:

To send for help.

To stay with the patient.

To get her hands surgically clean if possible, and if unable to do so, not to touch the patient's genitals.

If it becomes necessary to touch the genitals or to deliver the baby and her hands are not clean, she may

do the necessary handling with a sterile towel. If she has not this at hand, far better to allow the child to be born without assistance than to run a risk of infecting the mother.

Preparation of Patient.—There are few cases, however, that do not afford time for proper preparation. This should be done with as much care as for a surgical operation. The process is much the same. A thorough enema should be given and repeated if not effective; a tub or shower bath, or in rare cases a sponge bath; and the local preparation done. No douche should be given except by special order.

The chief object of the enema is to have the rectum and lower bowel as clean as possible, so that no fecal matter shall be passed out as the child is pushed against the rectum during delivery. In a case which gives little time for preparation, it is better to omit the enema altogether, or it may defeat its own object.

The local preparation is the same as for a vaginal operation, shaving, and a thorough scrubbing of a large area. The abdomen should be included in the preparation, but no dressing need be put on. Apply a sterile vaginal pad, fastening it with a sterile T-binder. If the physician does not wish shaving done, clip the pubic hair as short as possible with the scissors.

The patient should put on a fresh nightgown, a wrapper or kimono open all the way down, stockings and bed-room slippers. Her hair should be arranged in two braids. *She should not be put to bed* unless she is well advanced in labor, but should sit in a chair or walk about the room. The upright position assists the progress of labor, while lying down retards it; this should be explained to a patient who is inclined to go to bed.

The Nurse's Manner.—The attitude of the nurse toward her patient and toward the event of childbirth is important. It should be that of cheery sympathy. The birth of a child is a normal occurrence, and is usually a joyful occasion. The accompanying pain is

to be borne as best it may, and every assurance should be given that the physician and nurse will do all which they can to lessen and shorten it. Do not lead the patient to expect "an easy time;" speak of it as a possibility, but try to have her feel that the coming of the child will be compensation for all that she has to endure.

Most patients who scream and make much ado when in labor are frightened. The nurse can do much toward helping the patient retain her self-control, thus making it easier for herself and for those about her.

Stages of Labor.—Labor is considered as having three stages.

First stage, the dilatation of the mouth of the uterus.

Second stage, the expulsion of the child.

Third stage, the expulsion of the placenta or after-birth.

First Stage.—The pain of the first stage is usually hardest to bear, for while the second stage pains are more severe, the patient can feel that they are accomplishing something. First stage pains are 20 to 30 minutes apart at the beginning, becoming more frequent and harder as labor advances, usually 3 to 5 minutes apart near the commencement of the second stage, or they may be so close together as to be practically continuous. They are not accompanied by any desire to bear down or expel the contents of the uterus and the patient should be instructed not to make any effort, but to bear the pains as easily as possible and to get as much rest as she can between them. At this stage bearing down or straining not only accomplishes nothing, but exhausts the patient.

As dilatation takes place, there will be some discharge of blood and mucus from the vagina due to the opening of the mouth of the uterus and the stretching of the cervix. The nurse need not remain in the room during the first stage, but should be in and out frequently. The bell should be where it can be gotten at for a sudden

call, as the "breaking of the waters" sometimes occurs during this stage. This is the rupture of the membranous sac in which the child lies, and releases a greater or less quantity of fluid, usually yellowish or greenish in color; there may be several pints of it.

Second Stage.—When the second stage begins, there is a change in the character of the pains accompanied by a desire to bear down or strain. The patient should in most cases now be put to bed or taken to the delivery room. From this time on, she should not be left alone. If the husband be present, he may be made useful by letting the patient pull upon him, or he may rub the lower part of her back to relieve the aching which commonly occurs between pains; these things are exhausting for a nurse to do, especially if the second stage is long. As each pain comes on, the patient should be instructed to close the mouth, hold her breath, and bear down. If she wishes something to pull upon, tie a sheet to the foot of the bed and give her the ends of it.

Second stage pains are usually three to five minutes apart and last one or one and a half minutes. The physician, if he is not already in the house, is summoned at this time.

In the Delivery-room.—If a young nurse is to be in the delivery-room, she should scrub her hands thoroughly and put on a clean operating gown. The gown protects her dress from soiling and keeps her clothing from contact with the patient or things in the room.

Keep out of the way of the surgeon and senior nurses.

Watch the patient's hands and see that she does not put them down about the genitals.

Endeavor to keep the sheets, etc., in place, so that no portion of the patient's body is exposed except the vulva. See that her nightgown is well up in the back.

Do not touch the vulva or vicinity. If asked to hold one of the legs, put your hands underneath and outside, never over the leg or on the inside.

If required to hand basins or sponges, keep your hands well on the outside of the utensil or package.

Keep your hands away from sterile things unless you are told to handle them.

Do not speak except to answer a question addressed to you. Chatting or passing remarks is out of place in a



FIG. 65.—Holding the uterus.

delivery-room. The coming of a new life into the world is a joyous, but solemn, occasion.

You may, by manner or by pressure of the hand, show sympathy for the patient.

Holding the Uterus.—If told to hold the uterus after the child is expelled, feel for it near the umbilicus deep in abdomen. Put the hand crosswise of the abdomen and press in and around the uterus, literally grasping

it. It should be felt as a firm, round mass. If you do not readily find it, ask a senior nurse to locate it for you, as it is important that someone be holding it during the third stage of labor. If it becomes soft under your hand, call attention at once to it. If the doctor takes it from you, resume your hold as soon as he finishes.

Care of the Baby.—If the baby is given into your care, see that it is well wrapped in a sterile towel, put into a soft, warm blanket, and laid on its right side in a proper receptacle where there is no draft. See that the navel



FIG. 66.—Abdominal binder.

is covered by some sort of a sterile dressing or that the towel covers it. Watch the child's breathing, and if it is not regular or the face becomes blue, call attention to it.

Sponging.—If asked to assist in sponging the vulva after the delivery, remember that only sterile sponges and solutions are to be used, and do not let your fingers touch the genitals. Sponge only downward, toward the rectum, and take a fresh sponge for each stroke. Neglect in this may cause an infection.

Binder.—If an abdominal binder is to be put on the mother, it should be wide enough to come well down

over the hips or it will very soon slip up and become useless. It should be pinned snugly and smoothly. A pad made of a folded towel may be put over and just above the fundus (top) of the uterus if the physician wishes it. This pad will need occasional readjusting.

The patient should if necessary have a fresh night-gown, should be wiped dry of perspiration, and warmly covered, as she is almost sure to be chilly from the nervous reaction. She should be gotten into a clean, dry bed as quickly as possible and allowed to rest. The clearing up of the room should be done speedily and quietly.

First Care after Delivery.—For the first twenty-four hours *rest* is all-important. If not disturbed, most patients will go to sleep soon after delivery. The quiet and sleep should not hinder most careful watching. The pulse and color of the face should be observed often, as it is during the first few hours that most hemorrhages occur. A pulse of 100 is a danger-signal and should be at once reported. The pulse should be about normal, and if it goes even to 95, the patient needs watching. The least suspicion of anything wrong should send a nurse for help, as a patient may bleed to death in a few minutes from post-partum hemorrhage.

The vaginal dressings should be inspected occasionally and changed as they become soiled. They should be touched only on their outer side; in putting on a fresh pad, take it into your hand folded and unfold it just as it is placed so that there shall be no possibility of its touching the bedclothing or anything not sterile.

Any excessive bleeding should be reported. If large clots are passed, save them for the inspection of doctor or head nurse.

After-pains.—A multipara (woman who has had more than one child) usually has after-pains. These are due to contractions of the uterus, and while annoying, constitute a safeguard against hemorrhage. They may last a few hours or for several days, and may be

slight or very severe. If they keep the patient awake at night, the fact should be reported to the doctor.

Catheterization.—If the patient is unable to urinate, after all methods of assisting her have been tried, she may upon order of the physician be catheterized. There is, during the first day, some swelling and the tissues are apt to be bruised, making it difficult to find the urethra. If there are stitches in the perineum, the young nurse may need assistance in catheterizing.

Irrigation.—If the patient urinates, the vulva should be irrigated afterward by pouring over sterile water, salt solution, weak bichloride solution (1-8000), or boric solution, from a pitcher or graduate glass. The pitcher should be clean and the solution sterile, and of exactly the right temperature as the parts are very sensitive; test it by pouring a little on the back of your hand. After irrigating dry with sterile cotton or sponges, being careful to sponge down and not to use the same sponge twice. If there are stitches, pat rather than wipe, and exercise the same precautions as in any perineorrhaphy.

The Nipples.—The mother's nipples should be treated like clean wounds. They should be washed with boric solution before and after nursing, and the clothing which touches them should always be clean.

If the nipples become sore or the slightest fissure or crack occurs, call the doctor's attention to it and faithfully carry out whatever treatment he prescribes. Sterile dressings should be put on and the patient cautioned about letting them become disarranged. Cracked nipples would heal readily were they not torn open every few hours by the baby's nursing. If a shield can be used, it helps very materially, but even with it there is a good deal of irritation. Cracked nipples are nothing less than open wounds and are always in imminent danger of infection.

An infected nipple may lead to abscess of the breast, which aside from the pain it causes may necessitate

stopping the nursing and so endanger the child's health or even its life. Carcinoma (cancer) of the breast occurring in later years is often traceable to an abscessed breast which occurred while the patient was nursing her child. These considerations ought to induce a nurse to take the utmost care of her patient's nipples.

The Breasts.—On the third or fourth day the breasts are apt to become engorged. This engorgement is not milk, but blood. If massage is ordered for its relief, it should be given with a circular stroke and directed away from the nipple, the object being to stimulate the flow of blood away from the breast. If the breasts are to be pumped, and massage is necessary in connection with it, the stroke should be toward the nipple, in the direction of the flow of milk. Any massage of the breast should be given gently, as the glandular tissue is easily injured and such injuries may cause carcinoma later in life.

Odor.—If there is any pronounced foul odor to the vaginal discharge, the fact should be reported and a soiled pad saved for inspection. The odor may be due simply to decomposing discharge retained in the vagina, in which case the patient is ordered to sit up in bed or given a careful douche. If the trouble is caused by material retained inside the uterus, it may require treatment by the physician.

Chills.—These are serious if they occur after the first few hours. They may be the heralds of a violent infection.

Any rise of temperature should be at once reported. When it is above normal, it should be taken every four hours. There may be some disturbance of the temperature, $99\frac{1}{2}^{\circ}$ or 100° , on the third or fourth day when the breasts are much engorged, or it may be due to the bowels not moving well. As a rule, a temperature above 100° is serious.

Getting Up.—Obstetric patients are kept in bed about ten days and are allowed to walk about at the end of two

weeks. Many patients feel able to be up much sooner than this, and protest against being kept in bed. The nurse may explain the reason for special care; the uterus grows greatly in size during pregnancy and when contracted immediately after delivery is about the size of one's two fists. It rapidly undergoes the process of *involution* (return to its normal size), shrinking in about ten days till it is but a few inches long. The material thrown off during this *physiological atrophy* constitutes the *lochia* or vaginal discharge of the lying-in period. The uterus is held in position by ligaments below and at the side, and while it is large and heavy may be readily displaced. One can easily see that if a woman gets on her feet too early after delivery, the uterus may sag in one direction or another and a permanent displacement result, with all its attendant discomfort and ill-health.

REVIEW QUESTIONS

What should a young nurse do in a case of precipitate labor?

Give in detail the preparation of a patient for delivery.

How many stages of labor are recognized? What does each include?

Give the nursing care during the first stage. The second stage. Give points for conduct in the delivery-room.

How do you hold the uterus after the child is born?

What care and watching should be given to the baby?

How should the sponging off after delivery be done?

How should an abdominal binder be put on?

During the first few hours after delivery what points should be specially watched?

What are after-pains? What is their treatment?

How do you cleanse the vulva after urination?

Describe the care of the nipples. What is the danger from a cracked nipple?

How do you massage a breast to relieve engorgement? How to remove milk?

What is the meaning of odor to the vaginal discharge in an obstetric case? What is done for it?

What is the meaning of the term *lochia*?

How long should an obstetric patient remain in bed? Why?

CHAPTER XXII

EYE, EAR, NOSE, AND THROAT NURSING EMERGENCIES

“Sweet ordering, arrangement, and decision.”

Demonstrations.—Handling of eye. Irrigation of ear. Spraying nose. Examination of throat. Artificial respiration.

THE EYE

All handling of the eye must be deftly and gently done. Clumsy handling often causes pain and may result in injury to the delicate tissues. Thoroughness is essential and is not easy to combine with gentleness. It takes a certain amount of practice to become at all expert.

Opening the Eye.—In holding the eye open, be careful not to put any pressure upon the eye-ball. Pull the skin of the eye-lid up or down as the case may be and hold it firmly against the edge of the orbit. Do not let your fingers press into the soft parts.

To Evert the Eye-lid.—To evert, or turn out, the lid place a small pencil or pen-handle under it, grasp the eye-lashes, and pull the lid gently out and down, rolling it over the rod.

Foreign Bodies in the Eye.—Cinders, specks of dirt, etc., may sometimes be removed by holding the eye open and wiping them out with a piece of clean, soft linen (a fresh handkerchief will do). If the patient be restrained from rubbing the eye, the tears caused by the irritating object may wash it into the inner corner from which it can easily be removed. A drop of castor oil put into the eye soothes an irritation and assists in removing any foreign material which may be causing it.

Putting Drops into the Eye.—Have the patient lie down or sit with the head thrown back in a good light. The nurse should stand so that her hands will not come between the eye and the light. The patient may face the light and the nurse stand behind him. Open the lids carefully with the fingers and hold them firmly. Hold the dropper near the eye, but be careful not to get it so close as to touch. Put in one or two drops near the outer corner; the tears and movements of the lids will distribute them over the eye-ball. More than two



FIG. 67.—Examination of upper lid.

drops are unnecessary, as the fluid runs or is squeezed out.

Droppers used for the eye should be sterile.

Irrigation with Syringe.—Use by preference a syringe made entirely of rubber, as if the patient struggles a glass tip may strike the eye-ball and hurt it. Lay a bit of cotton over the other eye to protect it, but *avoid letting solution run from one eye into the other.* Turn the patient's head slightly outward, hold a piece of cotton at the outer corner to receive the drainage, and place the nozzle of the syringe near the inner corner, letting the fluid flow outward. The solution should



FIG. 68.—Examination of lower lid.



FIG. 69.—Putting drops in eye.

be just comfortably warm. Use enough of it to remove all discharge; let there be a little force to the stream so that the cleansing may be thorough. After the irrigation, dry the eye outside with a bit of cotton, wiping outward, away from the nose.

Irrigation with Fountain Bag.—The same technic is used as in irrigating with a syringe. The bag should be hung very low, so as to have little force to the stream.



FIG. 70.—Method of syringing eye.

More solution will be used, so that it is well to have the patient's head on a Kelly pad.

Precautions.—For ordinary cases, the precaution of not permitting solution to run from one eye into the other may be sufficient; but in an infection of any gravity, the unaffected eye should be tightly sealed; a watch crystal held in place by a circular strip of adhesive plaster is usually used.

In all cases, whether infected or not, *never use anything for one eye which has touched the other.*

Never touch your own eyes while treating an eye case,

nor afterward, *until you have thoroughly scrubbed and disinfected them.*

Trachoma (Granulated Lids).—This is a communicable disease, and may be carried from one person to another by towels, etc., or by a bit of solution spattered into the eye while irrigating. The granulations are cauterized, or may be removed by scraping under an anesthetic. The eyes are then bandaged and allowed to heal.

Ophthalmia.—This is an inflammation of the conjunctiva (the membrane which covers the eye-ball and lines the lids). The variety called ophthalmia neonatorum is a gonorrhreal infection. It is acquired during birth by the eyes becoming infected from the mother's vagina. It may be prevented from developing by the application of a drop of a 2 per cent. solution of silver nitrate; the treatment is severe and physicians hesitate to use it unless they are sure of its necessity, though some employ it as a routine measure.

Ophthalmia cases of any severity require two special nurses. The baby must be isolated, and the nurse who cares for it must not touch or come near any other child. She should wear a gown while in the room, leaving it at the door when she goes out. She should protect her own eyes with automobile goggles, and should keep her hands away from her eyes even when off duty. In adults, no matter how well taken care of, the disease nearly always produces blindness.

Cold compresses are usually ordered for these cases; the technic of their use has been given in Chapter X. Frequent irrigations and drops of argyrol or some other antiseptic are used. The irrigation must be thoroughly done, for if pus is allowed to accumulate in the eye, there is danger of the infection attacking the cornea. Constant, vigorous, thorough treatment is the only thing which saves these cases from blindness.

Eye Operations.—In *iridectomy* and operations for *cataract* the eyes are bandaged and the nurse has no

handling of them to do. If the bandage slips or becomes displaced, do not attempt to remedy it either by pulling or readjusting. Call the head nurse or the doctor. Great care should be taken in moving these patients from stretcher to bed and for the first few days after operation; they should not be jarred nor allowed to make any abrupt movement. Bear in mind that there is a wound extending across about one-third of the eye-ball, the edges of which are held in place only by the eye-lids. In cataract especially the vacant space within the eye-ball left by the removal of the lens renders the iris liable to be displaced and permanent injury be the consequence. These patients are fed for a day or two upon soft or liquid diet, the design being to give food which does not require mastication with its consequent jarring.

Be sure to find out just what the patient may or may not do, and follow orders exactly. Surgeons differ in their methods, and a case which seems but slightly different from another may require more or less precaution. There is always a chance of permanent injury following a blunder.

THE EAR

In ear troubles, the nurse needs especially to know *what not to do*.

Never, without the advice of a doctor, put into the ear any fluid except warm water.

Never put into the ear any instrument except a toothpick well covered with cotton. Insert this very carefully and only a short distance.

Do not permit patients with ear trouble to blow the nose vigorously.

Ear Irrigation.—The ear may be washed out with a bulb or fountain syringe; if the latter is used, it should be hung very low, on a level with the ear, so that the stream shall have little force. A kidney-shaped basin,

held just under the ear is a convenient receptacle for catching the drainage. The procedure is best managed with the patient in a sitting position. Use plain water, at a temperature of 110° to 115°F. Direct the stream a trifle upward, not directly at the ear drum.

Ear Examination.—If a small child is to have its ear examined or treated, it is best for the nurse to hold it in



FIG. 71.—Method for syringing ear with fountain syringe. The lower end of bag should not be above level of auditory canal.—(McCombs.)

her lap. With the child facing sideways, she places one arm around its shoulders and across its arm, her other arm across its head, thus supporting the head and body and at the same time preventing any sudden movements. If the child is wrapped in a sheet or blanket, it can be more surely and easily restrained.

THE NOSE

In the treatment and handling of the nose as well as the ear there is need for gentleness. Any procedure, if improperly done, may be the cause of more harm than good.

The Nasal Douche.—For cleansing the nose, a glass douche or soft rubber nasal syringe is used. If the latter be employed, very little force should be given to the stream, as there is danger of forcing matter into the



FIG. 72.—Method for syringing nose. The syringe is introduced into upper nostril, the solution escaping from opposite nostril or mouth.—(McCombs.)

Eustachian tube and setting up an inflammation in the ear (otitis media). The patient, lying in bed, may turn its head a little to one side over a low basin while the nurse injects or pours the solution into the nostril which is uppermost, letting it run out of the lower. The head may then be turned to the other side and the douching repeated. The solution used, salt solution or some antiseptic, should be blood-warm.

Nasal Spray.—If the nose is to be sprayed, use the large tip of the atomizer, one which does not go into the nose but just to the rim of the nostril. Tip the atomizer so as to direct the spray *back*, not up. As you spray, ask the patient to inhale forcibly, so as to help in reaching every part of the nasal cavity.

The nose of a baby or small child may be cleansed by using a bit of cotton twisted on a tooth-pick. It should not be pushed far in and the handling should be gentle.

Caution all patients against blowing the nose with any force. This habit is the cause of some ear troubles.

THE THROAT

Throat Treatments.—If the throat is to be sprayed, have the patient open the mouth, meantime saying



FIG. 73.—Laryngoscopy, showing the mirror being introduced, and also the relative position of the patient and examiner and the position of the light.—(Morrow.)

“Ah” so as to make the throat round and give a view of it. Use the long, curved atomizer tip, placing it as far back as possible. Direct the spray first to one side

of the throat, then to the other; then toward the center. If necessary to enable you to see, use a tongue-depressor, so that you may be sure that you are spraying the throat, not simply the mouth and tongue.

Throat Examination.—If a child is to have its throat examined or treated, the nurse may take it in her lap, with its face forward. She places her arms in front of



FIG. 74.—Illustrating a very good and common position for mouth and throat examination.—(Kerr.)

the child's, thus enabling her to restrain its movements, letting her hands come up to the top of its head so that it may be held quiet and a little back if necessary.

Gargling.—Many patients do not know how to gargle properly, and the solution hardly touches even the pillars of the throat. Have them try holding the nose while gargling and see if the liquid will not go a little

farther back. If a gargle is used hot, the effect is more pronounced. A spray is usually more effective than a gargle.

Cleft Palate.—After operations for cleft palate, great pains must be taken to keep the child's mouth clean. If the child is old enough to rinse his mouth, this is the best way of accomplishing it; but if not, the nurse must clean it very gently with a bit of cotton dipped in some antiseptic solution. The roof of the mouth should be patted rather than wiped, so as not to risk loosening the stitches.

In feeding a child with a cleft palate, turn it over upon its face, and give the food from a spoon or bottle. In this way the food is less likely to be forced into the nasal cavity.

EMERGENCIES

It is not the province of this book to deal with occurrences outside the hospital; consequently, only accidents and emergencies likely to be met with inside the hospital walls and needing to be handled by pupil nurses, will be mentioned.

General Principles of Action.—When anything goes suddenly wrong with a patient and the condition seems serious, the nurse should *send* at once for help, but *should not go*. She owes it to the patient to remain with him; and as a rule, immediate help though unskillfully given, is more effective than skilled help which arrives a little late. If the nurse is unable to summon help and must go herself, it becomes a matter of judgment as to whether she shall first attempt to control the situation alone or run the risk of what may happen while she is gone.

A nurse must, absolutely *must*, exercise self-control in emergencies. She must learn not to lose her head, but to think before she acts, and not to let the patient become alarmed by any exhibition of anxiety on her part. If she cannot do these things with fair success,

she may question whether she has not mistaken her calling.

Hemorrhage is one of the commoner accidents in hospital practice.

Hemorrhage from a Wound.—This is usually best controlled by direct pressure upon the bleeding point. A hard roll or wad of sterile gauze should be held tightly against the bleeding place till the blood has time to clot. If the bleeding is in the leg or arm, try elevating the part; or flex the limb strongly, pressing the vessels in the bend of the elbow or knee; or try pressure on the inner surface of the limb against the brachial or femoral artery.

Hemorrhage from the Lungs.—This may be recognized by the bright color of the blood and its frothy consistency. The blood comes up with cough, even though it may be but slight. Prop the patient into a sitting position, and keep him absolutely quiet. Ice bags may be put upon the chest, and morphine may be ordered given hypodermically to control the desire to cough.

Hemorrhage from the Stomach.—In this the blood is dark, may be mixed with food or mucus, is clotted, never frothy, and is vomited or regurgitated. Have the patient lie quietly and try to control any desire to retch or vomit. Put an ice bag over the pit of the stomach.

Hemorrhage from the Mouth, Nose, or Throat.—Blood from these three sources may be bright in color, is apt to be stringy, having mucus or saliva mixed with it. (It may be confused with hemorrhage from the lung if the characteristics of each are not known.) If it comes from the mouth or throat, rinse the mouth or gargle with ice water; give the patient small pieces of cracked ice to swallow. Alcohol diluted with very hot water may also be effective.

Hemorrhage from the Nose.—Have the patient keep the head upright, letting the blood run down the throat in preference to bowing the head over a basin. Apply

cloths wrung out of ice water to the outside of the nose and to the back of the neck. Do not allow the patient to blow the nose.

Post-partum Hemorrhage.—In hemorrhage from the uterus following childbirth, the nurse must not leave the patient even to call for help. The bleeding is due to relaxation of the uterine muscle and the only means of stopping the flow is to get that muscle to contract. Pull up the abdominal binder, find the uterus, grasp and squeeze and knead it, thus stimulating contraction. If you cannot find the uterus, knead the abdomen deeply in the vicinity of the umbilicus, and as a rule, you will shortly feel a mass growing firm under your hand, signifying that the organ has begun to contract.

If another nurse arrives before the doctor or head nurse, have her prepare a hypodermic of ergot (preferably the aseptic ergot) as much as the syringe will hold. The doctor may wish it given when he arrives. (The injection is made deep into the muscles of the hip.) Have the foot of the bed elevated as high as can be managed. Have the patient covered warmly and the windows opened for fresh air. If she complains of thirst, give her plenty of cold water to drink.

The one thing of importance in post-partum hemorrhage is to *keep hold of the uterus*, rubbing, kneading, and stimulating it. Do not release your hold for any purpose, until it is well contracted.

Hemorrhage in Typhoid.—In hemorrhage from the intestines, due to typhoid or other cause, keep the patient quiet and put an ice bag on the abdomen. The foot of the bed may be elevated.

Internal Hemorrhage.—In typhoid or post-partum hemorrhage there may be little external bleeding, but the symptoms of internal or concealed hemorrhage may be present. These have been given in Chapter XVI, weak, rapid pulse, sighing respiration, pallor, air hunger, sudden drop in temperature, etc. Nothing can be done except to keep the patient quiet and to reassure him,

meantime using every effort to get the surgeon there as quickly as possible.

Hemorrhage from Circumcision.—If a baby bleeds following a circumcision, send for the doctor at once, as children bear badly even a small amount of hemorrhage. If there seems to be an oozing, a few drops of adrenalin may be applied directly to the part. If a tiny spurt of blood can be seen, grasp a bit of the tissue with a small artery forceps.

Pulse in Hemorrhage.—Remember that the condition of the patient's pulse usually tells better than anything else of the severity of the hemorrhage.

Stimulation in Hemorrhage.—Do not give stimulants to a patient who has had a hemorrhage. They increase the heart action and render the bleeding likely to continue or recur.

Collapse.—This is marked by weak, rapid pulse, anxious expression, and symptoms of weakness and prostration. It is to be treated by warmth, quiet, rubbing with alcohol, etc. Stimulation is given upon order of the physician, though salt solution may be begun before he arrives. The foot of the bed may be raised. The patient's head should be kept low.

Convulsions.—Very little can be done in case of convulsions except to keep the patient from biting his tongue or injuring himself by falling, etc. The duration of the seizure should be noted by a timepiece and its special characteristics observed so that you may be able to describe them for the physician.

For convulsions in a baby, put the child, clothing and all, quickly into a warm bath. The child may be undressed while in the bath.

Epileptic Fits.—These may be confused with convulsions. The patient is unconscious, twitching, frothing at the mouth, or may cry out. The attack may be followed by a short period of delirium. No special treatment can be given. The nurse should remain with

the patient, keep him from incurring any injury, and note the length of the attack.

Fainting.—This is due to a deficiency of blood in the brain. Nature suggests the treatment by causing the person to fall. He should be laid flat with the head low—no pillow or even with the head hanging over the edge of the bed—the clothing about the neck and chest loosened, the face bathed with cold water, the windows opened to admit fresh air, ammonia or smelling salts held to the nose, etc. Note the length of time that the patient remains unconscious.



FIG. 75.—Sylvester's method of performing artificial respiration (inspiration).

Artificial Respiration.—If a patient, from any cause, suddenly ceases to breathe, the nurse should send for help and meantime attempt artificial respiration. For an adult, Sylvester's method is probably the most satisfactory. Place the patient flat on his back, remove the pillow, stand at his head, and grasping his elbows, press them close to his sides, striving to push in the ribs and expel the air from the chest. Then pull the

arms slowly up over the head, permitting the chest to expand to its fullest capacity. Lower the arms and repeat the pressure upon the chest. Continue, alternately raising and lowering the arms. Be careful not to make the movements more rapid than a person ordinarily breathes, 18 to 20 times a minute. Artificial respiration is often rendered ineffective by being done too rapidly to give the chest time to expand.

In giving artificial respiration to a baby, grasp the legs in one hand and with the other support the back



FIG. 76.—Sylvester's method of performing artificial respiration (expiration).

and head. (A part of the clothing should have been removed.) Double the child up, pressing its head and knees against the chest; then undouble it, bending the head back and leaving the chest free. Repeat, not too rapidly. Be sure that the room is warm, or the child may become chilled from the necessary exposure. Have a mustard bath prepared (a heaping teaspoonful of mustard to a small tub of warm water), and dip the

child into it for a minute; the stimulation may start respiration. Occasionally hold the baby head downward and with the finger wrapped in gauze clear out any mucus which may be in the throat. Continue arti-

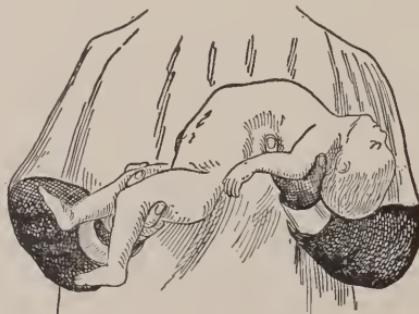


FIG. 77.—Byrd's method of artificial respiration: full inspiration.—(Dorland.)

ficial respiration until help arrives, even if there be no visible effect from it.

The Schaefer method is also excellent. The patient is placed flat on his chest with face turned to one side.



FIG. 78.—Byrd's method of artificial respiration: full expiration.—(Dorland.)

Press with hands flat on back over lower ribs, firmly and gradually; then relax. Count five slowly for each pressure and relaxation.

Fire.—If anything catches fire, do not attempt to pick it up or remove it to another place, as this is sure to

result in badly burned hands. Throw a rug or blanket over it. Water is not always effective, though it may be tried, likewise salt solution if it is at hand. Bedding and rugs are always available in a hospital and smothering out a flame is usually the quickest way.

Burns.—For the immediate treatment of a burn from fire, steam, or hot water, apply sterile vaseline freely.

If the burn is from an acid, as nitric or sulphuric, apply a strong solution of baking or washing soda.

If the burn is from an alkali or caustic, as lye, caustic soda, etc., bathe it with dilute vinegar or any weak acid solution.

If the burn is from *carbolic acid*, either internally or externally, use plenty of *alcohol*. If this is not at hand, whiskey or brandy may be substituted. Denatured alcohol will do, but not wood alcohol.

Mistakes in Medicine.—If a wrong dose of medicine has been given, report it immediately. If you are not sure that a mistake has been made, it is best to act as though it had. Induce vomiting by some means (unless the drug was carbolic acid or a caustic), by giving mustard and water, strong salt and water, or try running the finger down the throat.

If help does not arrive shortly, the nurse is justified in giving the following:

For bichloride, the raw whites of eggs, one to four grains of the drug.

For carbolic acid, alcohol or whiskey.

Minor Injuries.—The nurse herself should be specially careful about *scratches* or *punctured wounds* which she may get in the course of her work. No matter how slight the injury may appear, she should institute prompt treatment for it. Many doctors and nurses have lost their lives from the prick of a needle or the scratch of a pin, and one cannot afford to take chances.

Scrub the wound thoroughly and apply a wet dressing of alcohol or bichloride 1-1000. Wounds of the ordi-

nary sort are so small that there is no danger of poisoning by absorption of the drug.

For a *bruise*, use first cold water to contract the tissues and prevent the blood from getting much into them. Afterward apply moist heat to promote absorption.

For a *sprained ankle*, put the foot into a deep basin or tub of water as hot as can be borne. Keep it there until the doctor arrives.

REVIEW QUESTIONS

How do you open the eye? How do you evert the lid?

How may foreign bodies be removed from the eye?

Tell how to put drops in the eye.

Give the technic of irrigating the eye with a syringe.

Give the technic of irrigating the eye with a fountain bag.

What precautions should be taken in handling eye cases?

What is the cause of ophthalmia? Give in detail the precautions to be observed in its care.

What things are to be observed in the care following operation for cataract?

Give points about the care and handling of the ear.

How is ear irrigation done?

How may a child be held for an ear examination?

How is a nasal douche given?

How should a nasal spray be managed?

What is the danger of blowing the nose forcibly?

How do you spray the throat?

How may a child be held for a throat examination?

What are the points to be observed in the care of cases after operation for cleft palate?

Give general points in the meeting of emergencies in the hospital.

What can a nurse do in hemorrhage from a wound? In hemorrhage from the lungs? From the stomach? From the mouth or throat? From the nose?

What should be done in post-partum hemorrhage? In typhoid hemorrhage? In bleeding after circumcision?

Should stimulants be given after a severe hemorrhage? Why or why not?

What can be done in case of collapse? In convulsions? In epileptic fits? In fainting?

How is artificial respiration done? Give method of resuscitation of a baby which has stopped breathing.

What should be done when anything catches fire?

What is the immediate treatment for a burn by fire, steam, or hot water? For a burn from an acid? From a caustic?

What is the antidote for carbolic acid?

What should be done when a wrong dose of medicine has been given?

What care should be given scratches and punctured wounds? Bruises? A sprained ankle?

CHAPTER XXIII

THE OPERATING-ROOM

"It requires more than mere mechanical skill on the part of a nurse to follow the preparation for an aseptic operation. Modern methods require that the work of the surgeon be supplemented by the constant and intelligent service supplied by the trained nurse."

Demonstrations.—How to hold a struggling patient. Arranging patient on the operating table. Making up supplies. Cleaning up after operation.

The young nurse is not expected to take any responsibility in the operating-room, but she may be called upon to assist there with work which does not require her to have surgically clean hands. This work involves the handling of packages and utensils containing sterile materials, and while it resembles the work of assisting at a dressing, it is far more extensive and requires special instruction.

Nurse's Duties during the Administration of an Anesthetic.—If asked to remain with a patient while an anesthetic is being given, the nurse's manner should be cheery and self-controlled, and she should be on the watch for things to be done for the patient and for the anesthetist. See that the patient is properly covered, that she has on a warm nightgown and leggings, that she has urinated recently or been catheterized, that she has removed any loose teeth and has laid aside her jewelry. Help the anesthetist put on and tie his gown, see that he has a piece of gauze for covering the patient's eyes, and that all needed articles are at hand.

The anesthetist's stand should contain the following:

Top, two inhalers,
chloroform, one bottle,
ether, 3 or 4 cans ($\frac{1}{4}$ lb.),
alcohol,
cold cream or vaseline,
tongue forceps,
mouth gag,
old knife for opening ether cans,
scissors,
large pieces of gauze for covering eyes,
hypodermic tray,
filled hypodermic syringe,
amyl nitrite pearls,
small sterile sponges for giving hypodermic.

Shelf, emesis basin,
six small towels,
small pieces of gauze for wiping patient's mouth.



FIG. 79.—Anesthetist's stand.

With a bit of gauze apply cold cream or vaseline around the patient's mouth and nose, putting on enough to prevent the vapor of the anesthetic from burning the skin.

As the patient begins to inhale the anesthetic, take hold of her hand, not with the idea of restraint, but to reassure her. If she attempts to push away the inhaler, you may hold her hand tightly. If she struggles during the stage of excitement, you may (1) grasp both wrists firmly, and stand facing her, far enough toward the foot of the table so that you may if necessary, throw your weight across her thighs. (2) Grasp the side of the table



FIG. 80.—Nurse holding struggling patient.

or stretcher just above her elbows, and place your elbows over her forearms. Either of these two positions gives excellent control. The anesthetist restrains the head.

Never talk while an anesthetic is being given. It is undignified; also, a patient often hears and remembers conversation which takes place after she is apparently unconscious.

When the patient is well under the anesthetic, help transfer her to the operating table, or if she is already in the operating-room, assist in arranging the blankets.

See that the anesthetist has his stool in place and his stand conveniently near.

Preparation of Dressings.—A young nurse may be allowed to make up and wrap dressings for sterilization. The following points are to be remembered:

Before you begin, dust the table upon which you are to work.



FIG. 81.—Nurse holding a struggling patient.

In cutting gauze, make the pieces slightly smaller than the pattern, rather than larger. A half inch wasted on each piece makes many yards in a week.

Whenever possible, cut twenty or more thicknesses of gauze at once.

Do not cut cotton. It is easier to tear it, and takes less time.

In folding dressings, remember that the chief object in so doing is to dispose of the raw edges. Never leave a stray end.

Do not leave even a small ravelling on a piece of gauze which is ready to be sterilized. It may get into the wound and act as an irritant.

In wrapping dressings, do not fold them too tightly. It has been proven by experiment that steam, even under considerable pressure, does not penetrate tight folds. The same precaution should be observed in packing a sterilizer; very tightly packed dressings cannot be properly sterilized.

In sewing tapes to abdominal pads, etc., make your stitches strong enough to resist a considerable pull.

Care of Instruments.—To sterilize instruments, boil them for ten to fifteen minutes in a 1 per cent. solution of sal soda; the soda acts as a disinfectant and also prevents them from rusting.

Scissors and needles are usually boiled but five minutes, as long boiling takes off their edge. They should not be put into the sterilizer until the other instruments are nearly ready to be removed.

Knives are not to be boiled unless by special request. If they are boiled, the blades must be wrapped in cotton. The edge should not be allowed to strike other instruments or hard corners.

In cleaning up after an operation, the instruments should be washed in clear cold water to remove the blood, each one being taken apart if possible and the joints scrubbed with a brush to remove any accumulation which may be there. They should then be boiled in soda solution and afterward scrubbed with some polishing powder which does not scratch, using a cloth for the flat surfaces and a brush for rough parts and joints. They should be rinsed with very hot water and thoroughly dried. In damp climates, the joints (and sometimes the whole instrument) should be treated with vaseline to prevent rusting.

Do not scour the cutting edge of knives and scissors.

Polish needles by running them back and forth through

an emery bag made of three or four thicknesses of fine flannel.

Care of Utensils.—Basins and pitchers should be rinsed in clear water, scrubbed with cleaning powder and a brush, inside and out, well rinsed and dried. If the case was a "dirty" one, they should be boiled before the scrubbing.

The operating table, stools, basin, stand, etc., should be washed with clear water to remove any blood stains, then scrubbed with a cloth and scouring powder or laundry soap. Just before an operation, they should be wiped with a disinfecting solution.

Hand brushes should be thoroughly washed in clear water, dried and put away in a clean box or wrapped for sterilizing.

Rubber gloves should be washed on both sides with clear water, filled with water and boiled for fifteen minutes. They should then be thoroughly dried on both sides, well powdered inside and out with talcum, and folded in gauze or a towel.

Alcohol which has been used in the operating room should be filtered through cotton and saved for back-rubbing, etc.

The Unsterile Nurse.—When a nurse is to act as unsterile assistant during an operation, she should have a list of the contents of the tables which hold the articles she is to handle. She should be certain that they are all there, that she knows the exact location of each and can hand it without hesitation.

Most operating-rooms are so arranged that the sterile materials are grouped in one place, the unsterile in another. It is wise for the unsterile nurse to keep entirely away from the vicinity of sterile supplies unless she is asked for some particular article. By remaining as far as possible on her own side of the room she will be in less danger of touching something she should not.

Unsterile Table.—The contents of the unsterile nurse's

table are as follows, each hospital, of course, having its own arrangement of work and materials:

Top, right, two-quart pitcher of warm, sterile water,
one-quart pitcher of bichloride solution,
bottle of green soap,
bottle of alcohol,
bottle of tincture of iodine,
package of sterile sponges for scrubbing,
basin containing sterile brush for scrubbing,
Top, left, three sterile gowns for surgeons, each in a separate
package,
packages containing face-pieces and caps for surgeons
Shelf, three towels,
emesis basin,
jar of drainage tubing,
specimen dish,
adhesive plaster,
safety pins,
abdominal or T-binder,
roller bandages.

Duties of the Unsterile Nurse.—In assisting, the nurse should keep in mind that she may be wanted suddenly at any time. She should therefore *never leave the operating-room* unless sent, and should then return as promptly as possible. If she goes to boil an instrument, she should not wait for it, but return to see if anything is wanted.

She should watch the nurse in charge so that she need not be called but may be directed by a word or a glance.

She should not speak unless spoken to, and then should answer as briefly as may be.

She should not attempt to watch the operation.

She should have and commit to memory a list of her duties during each stage of the operation. A sample list is as follows.

Before the Operation.

Fill solution basins,
fill irrigator and cover it,
prepare hypodermic for anesthetist,
put alcohol in basin on sterile table,

tie doctors' rubber aprons,
get gowns for visitors,
put scissors and needles to boil,
open dressing and utensil sterilizers,
help anesthetist with gown,
put doctors' caps and face pieces on them,
tie gowns for doctors and sterile nurse,
open instrument sterilizer.

At Beginning of Operation.

Help arrange patient on table,
adjust blankets,
put feet into leg-holders, if used,
place Kelly pad,
protect blankets with small rubber sheets,
unpin and take off binder or bandages,
remove dressings,
place sponges for scrubbing,
pour soap, water, and bichloride,
pour alcohol or iodine as needed,
place instrument tray, if used.

During Operation.

See that the waste pails are in place,
see that instrument sterilizer is boiling gently,
keep clean solution in all basins,
have hot salt solution ready and pour it when asked,
wipe doctors' faces when necessary,
turn irrigation on when needed,
pick up, wash, and re-boil any instruments dropped,
have cautery ready if needed,
help in putting table into Trendelenberg position,
open and hand jar of drainage tubing when needed,
get and boil any additional instruments asked for,
watch anesthetist and give hypodermic when asked,
open fresh cans of ether,
hand emesis basin, sponges or towels if needed,
watch sterile nurse to see if she wants you,
listen to what the operating surgeon says,
stay in the operating-room.

At Close of Operation.

Notify ward that patient is returning,
ring for porter or call orderly,
get basin of sterile water for sponging,
help dry patient,

hand adhesive plaster,
hand binder and safety pins,
help put on and pin binder,
wrap patient and watch her,
untie doctors' gowns,
help put patient on stretcher,
go down with patient unless told not to.

Duties of Sterile Nurse.—It is rare that a first-year nurse will be called upon to act as sterile assistant. If there is occasion for her doing so, she should familiarize herself with the contents and arrangement of the sterile tables. They may be as follows:

Large table, top,

Instruments, arranged in order, each sort having its special place. Those most used are in front, the odd pieces at the back.

Basin containing water and sponges for washing instruments.

Shelf,

Tray containing knives,
basin of hand solution,
final dressings.

Small table, right,

Catgut in covered dish,
silk-worm gut, wrapped,
any other sutures used,
needles in dish,
small dish of alcohol,
needle-holder,
space for threaded needles.

Left,

Sponges, large and small,
towels,
abdominal rolls or packing,
any special dressings.

Shelf,

Sheets,
extra sponges and towels.

She should have and commit to memory a list of her duties during each period. The following corresponds approximately to the work of the sterile nurse in the average hospital.

Before the Operation.

See that tables, basin stand, irrigator, stools, etc., are in position,
boil brushes and gloves and put them in place,
arrange anesthetist's stand,
try cautery to see if it works,
get operating table ready, warming apparatus, pads, blankets, etc.,
get Kelly pad ready and in place,
put instruments to boil, except knives and scissors,
put knives into carbolic (or alcohol),
put on rubber apron and cap,
scrub up,
put on gown,
get out basins, pitchers, etc.,
cover tables,
get dressings from sterilizer and arrange them,
put on gloves,
get instruments, arrange and cover them,
get out sutures, threading a part of the needles.

At Beginning of Operation.

Place sterile towels for the scrubbing up,
place sterile sheets,
place sterile towels, etc., about field of operation,
if instrument tray is used, cover with towel,
place sponges, large and small,
uncover instruments and hand ones first needed,
(knife, artery clamps, tissue forceps, scissors).

During Operation.

Keep surgeon supplied with sponges,
keep at least two artery clamps near assistant,
keep tissue forceps, knife and scissors clean and near surgeon,
hand other instruments as needed,
lay back on table instruments no longer needed,
keep instruments washed,
keep clean towels about field of operation,
have ligatures unwound, cut and ready,
have sutures threaded and placed in needle-holder,
listen to the surgeon,
watch your technic,
watch operation if you can.

At Close of Operation.

Cover or put away sutures,
hand sponges for cleaning and help sponge,
hand dressings,
take off gloves and help bandage,
pin binder and help wrap patient,
if another operation is to follow, wash instruments and put
them to boil.

REVIEW QUESTIONS

What are a nurse's duties just before and during the administration of an anesthetic?

What articles should be ready for an anesthetist?

How can a struggling patient be held? Give two methods.

Give points on making up and wrapping dressings.

Give points on the sterilization of instruments.

Give points on cleaning instruments.

How should basins and pitchers be cleaned? Tables, etc.?

How should rubber gloves be cared for?

What articles are needed for the unsterile nurse's work in the operating-room?

What points should the unsterile nurse keep in mind when assisting?

What are the duties of the unsterile nurse before the operation?
At the beginning of the operation? During the operation? At the close of the operation?

What are the contents of the tables which hold the sterile supplies for an operation?

What are the duties of the sterile nurse before the operation?
At the beginning of the operation? During the operation? At the close of the operation?

CHAPTER XXIV

THE NIGHT NURSE. CONVALESCENCE. CARE OF THE DEAD

“This service of compassion is worked out before jealous eyes which note with unerring certainty whether it is a service of truth, the outcome of a pure heart.”

Demonstration.—The care of the dead.

THE NIGHT NURSE

Night duty, while in some details resembling day duty, is sufficiently unlike it to deserve special attention.

At night the whole atmosphere of the hospital undergoes a change. During the day, there is activity, and the patient shares the spirit of it. There are under way the treatments which may aid his recovery, the investigations which may help in a better diagnosis or more effective work, the inquiries and visits of friends, and something of the stir of outside life invades the quiet of the sick room. At night, the spirit of the institution should catch the spirit of the patient and, laying aside all but absolutely necessary work, should try to give him the rest which he needs.

Spirit of Night Work.—The night nurse finds her work so arranged that she has nearly as much to do as if it were daytime, and she sometimes fails to realize that her work has quite a different aspect from day duty. She should remember that even though she may do many of the same things which she does in daylight, they are to be done to quiet and soothe, to help the patient to gain through rest rather than through activity.

In the case of a very ill patient, for whom many

things must be done without regard to the time of day, one may in eagerness for results overlook the patient's need for rest and chance to react. We forget that sleep sometimes accomplishes more than treatment or medicine; and so we have the heedless nurse who wakes the patient for a medicine which might better have been postponed, and the thoughtless one who, finding a patient awake, turns on lights and bustles about doing things which make sleep impossible for another hour. A seriously ill person is usually restless enough to afford opportunity for all necessary work without disturbing him when he is quiet.

As soon as she comes on duty, the night nurse should make it a point to visit each patient and greet him individually; this assures all of her presence and her interest and makes a right start.

Helps Toward Quiet.—The watchword of the night nurse should be *quiet*, and to have her patients *rest* should be her aim. The nurse who does this is not only the one beloved by her patients, but she gets results of which the noisy, business-like nurse knows nothing.

Everything which tends to produce quiet should be looked after. The rules relating to visitors should be strictly enforced, and no matter how urgent the request no visitor, not even mother, wife, or husband, should be allowed to remain overtime unless by special permission from the office. Elevators should not be used unless absolutely necessary, doors should be closed or propped open so that they cannot slam, windows and screens should be so arranged that sudden gusts of wind will not disturb, lights should be turned low or well shaded (in convalescents' rooms put out), the hall lights should be screened, all little wants seen to at one time, everything that the patient can reach for himself put in a convenient place, and as far as foresight can be made to go, all planned to get and keep the patient asleep.

Expedients to Promote Sleep.—Many simple expedients promote sleep, and if the nurse will take time

for them, they will save time in the end. The chief helps to sleep are *quiet, darkness, cool air* and *good ventilation*. *Rubbing* limbs, head, or back is a soothing procedure, if one bears in mind the end to be attained and does not do it too vigorously. A slow, deep kneading of the muscles of the back and spine will often quiet a nervous patient when all else fails. *Change of position* or a readjustment of pillows and bedding may tend to give the necessary ease. *Food*, especially hot liquids, is often quieting. Hot milk seems to have special virtue in producing sleep. A cup of broth, followed by a few minutes' back-rubbing, has given many a patient hours of rest. In occasional instances, where the patient is lying awake thinking of himself and his affairs, five or ten minutes *reading* may distract his mind and get him to a point where sleep is possible. The matter read should be something without marked plot—poetry is excellent—and the reading should be done in an even, almost monotonous, tone of voice. A quick and thorough *ventilation* of the room is often very effective.

Many patients get cold toward morning and need extra covers; if she is careful, the nurse may go in and place a blanket over a sleeping patient without disturbing him.

Do not encourage a patient in thinking that mere sleeplessness is sufficient reason for demanding a narcotic. If one is quiet and comfortable, much sleep may not be necessary.

Lights.—As few lights as possible should be kept burning, not only as a matter of economy but also because they disturb the patients. The nurse is entitled to a good light at her desk, but if it is near or opposite patients' rooms, it should be screened or shaded.

The Nurse's Step.—The night nurse's shoes should, of course, be noiseless, but the character of her step is quite as important as the material in her shoes. A quick, pounding step in felt slippers may be very annoying

when a light, springy, deliberate tread in ordinary shoes may be unheard. The size and weight of the person has little to do with the matter, but her clumsiness or grace has much.

Voice.—The night nurse should learn to modulate her voice. Whispering is, of course, tabooed, as it is more penetrating and far more disturbing than ordinary speech. A low, even tone with distinct enunciation is the ideal to be striven for. There is a quality of voice, a smooth tone with little variation in it, which may be used standing close to a light sleeper without awakening him. A little thought and a few experiments in this line will be a revelation to the young nurse.

Manner.—The night nurse's manner needs attention. No matter how busy she may be, she should seem deliberate. Three patients may want attention at once, but a hurried, impatient manner does not help the situation. "As soon as I have time" makes them feel neglected, when "I will do it right away" will make them wait patiently for five minutes. The fine art of making each patient feel that his comfort is your supreme concern can be better cultivated on night duty than at any other time. Night duty gives the nurse opportunity to learn the management of work and a chance to show what she has learned. Calm self-control under pressure of work, coolness and serenity in the face of difficulties can never be better learned than on night duty.

Hearing.—Cultivate your hearing and give keen attention to all sounds at night. Learn to know by listening whether or not your patients are asleep. Try to discriminate between the restlessness of a sleeping person and one who lies awake. Make it a point to know the exact meaning of every slightest sound. When you are in one room, note what you can hear going on in other rooms, and never be the subject of such criticism as "I called and called and the nurse did not hear me." If the building is so arranged that you cannot hear the calls of any number of patients, report the matter and ask

to have some rearrangement of patients or of work. Remember also that patients can hear you, and that if you are in the serving kitchen chatting with another nurse or at the desk indulging in general conversation with a doctor, they are apt to be aware of it; the conclusions which they draw are not complimentary.

Morning Work.—Be considerate about waking patients for their morning toilet, temperature, etc. The complaint often made "The nurse wakened me at five to get ready for breakfast which isn't until eight," is sometimes justifiable. Spend some time in getting ready for your work. Get out fresh towels or other linen, measure medicines and place them in readiness, prepare nourishment which is nearly due and get out the dishes for serving it, see that you have a supply of vaginal pads or other dressings which are likely to be needed, and in every way prepare beforehand so that the morning work may be quickly done. When you must begin work, look about for the patient who is awake and take him first; if a patient has had a bad night and has near morning fallen into a sound sleep, omit him altogether and explain to the day nurse, taking the risk of her displeasure rather than to deprive the patient of his needed rest.

The Night Nurse's Responsibility.—This is far greater than that of the day nurse, and one should be alive to the fact. She has usually four or five times as many patients under her care as in the daytime. On day duty there is always a doctor or older nurse to go to, while on night duty, even when the hospital has a night superintendent, the pupil nurse must often decide for herself whether or not a matter is of enough importance to warrant disturbing someone or sending to the other end of a large building for help or advice. Let the nurse be over-careful of anything in the case of seriously ill patients. If a patient's life is in danger, she should not wait too long before notifying the office of it. If friends or relatives are to be sent for, they ought to arrive when

death is merely a probability, not after it has become a certainty. At least a part of this responsibility rests with the pupil nurse.

Judgment.—The night nurse is afforded excellent opportunity to cultivate judgment. When something apparently goes wrong or a patient seems not so well, try to look at the matter from all sides and to judge from what has gone before what is likely to follow. To this end, put yourself in possession of all the facts; for example, if a patient's pulse becomes poor in quality, note whether color and respiration also are affected, remember whether there have been nervous manifestations, recall when the last stimulation was given and whether it is too soon or too late for an effect from it, bear in mind what sort of a case you are dealing with, and above all, see that any anxiety which you may feel does not become known to the patient and so add to his.

On the other hand, *do not take chances*. Call for help or advice even with the probability of being told that you have been unduly alarmed, rather than take a risk. Be an optimist, but see that your patients have every attention which you can procure for them. Use the best judgment of which you are capable, but err always on the side of safety.

Definiteness.—Above all, try to be definite. When you call the night superintendent, have something to tell her. When you waken a doctor, be able to give a straightforward statement as to just what is going on. Your superiors prefer to be disturbed rather than to have a mistake or an over-sight occur, but they want facts upon which to base a judgment as to the urgency of the case. A doctor's apparent indifference may be due to a nurse's indefiniteness.

The Night Nurse's Care of Herself.—The night nurse should make the care of herself an important consideration. Night duty is an abnormal condition, and is

trying to nerves, digestion, and temper. It is easy when on night duty to get into habits which if continued may wreck one's health.

Rest.—See to it that you get proper rest. This means a sufficient number of hours spent in bed, if not in sleep. The rules of most hospitals insist upon six hours in bed, but we know that six hours is the minimum and cannot be continued for any length of time without damage. Let eight hours be your minimum, and sacrifice to it if necessary study and exercise. Going out for fresh air is not always as important as relaxation and rest.

Fresh Air.—If your hours of sleep will permit, get out into the fresh air every day. In any event, see that your sleeping room is so arranged as to afford you an ample supply of outdoor air. Open the windows wide, especially in warm weather, and screen the light from your eyes with a heavy blanket or a dark, opaque screen set between the bed and the window.

Food.—Be careful about your diet. Night nurses have proverbially capricious appetites but should be chary of indulging them. Treat yourself as you do some of your patients, and if you do not want solid food, take at least a small quantity of concentrated liquid nourishment. If you eat little, see that what you take is real nourishment, not knick-knacks and articles which may tempt an appetite but do not make blood and muscle. Do not go without meals.

Work.—For the quiet hours of the night when you are at liberty to sit down, provide yourself some suitable work. Up to midnight or thereabout study may be advisable, but toward morning one is hardly in condition to learn much from a book. Unless your eyes are unusually good, do not indulge in embroidery or fine sewing by artificial light. Some general reading may be done, but it should be for recreation rather than for culture. The hospitals which require their night nurses to make dressings are not far wrong, since that is work

not trying to eyes or muscles yet sufficient to keep one awake. If a night nurse has two hours leisure during her time on duty, she might spend a half-hour at lunch, a half-hour at study, a half-hour in sewing, and a half-hour in light reading.

CONVALESCENT PATIENTS

Convalescents are often deemed uninteresting. The reason doubtless is that the nurse misses the excitement of a fight for a life, and the constant activity involved in work with acute cases where result quickly follows effort. Some of the best nurses in acute cases fail to relax when the fight is over, and most of those who succeed with a patient who is no longer very ill do so because they appreciate the value of the social graces.

The nurse must learn to appreciate the changes which take place when convalescence is established. The nursing becomes less care of the body than attention to the mind. Encouragement, cheer, devices for making the time pass quickly, etc., take the place of medicines and treatment. If the nurse will bear in mind that convalescence is the finishing of the case, and will try to round out her weeks of hard work by leaving with the patient an impression of her personal interest in his case, it will do much toward helping her enjoy convalescents.

Precautions.—The nurse must guard the convalescent against overdoing. In his eagerness to try his returning strength, he may easily do too much and retard his progress. She must preach to him the virtue of making haste slowly. Visitors must still be carefully regulated. Do not expect the office to control the whole situation, but take it upon yourself to see that too many and too long visits are not inflicted upon a patient who is still weak and who needs to conserve his strength. If any special visitor proves tiring or disturbing or markedly tactless, let your head nurse know it.

Occupational Therapy.—As soon as convalescence is established, which may be even before the patient is allowed to sit up in bed, some occupation is in order. Sick people have what well people have not, plenty of time. Anything which passes away the long hours will probably be acceptable, and from the patient's standpoint occupation is recreative. On the other hand, *occupation may be curative* for mind or body. It may combat depression and discouragement, making the whole system function better and thereby hastening recovery. Or the occupation may be directly therapeutic, as when modeling or basketry enables rheumatic or partly paralyzed hands to regain their function, or jig-saw work "limbers up" a stiff ankle.

Usually such work is in charge of a woman specially trained for it; but the nurse may help by pointing out cases who need it, or who wish something to do, and in encouraging those who are working, reporting when one needs help or materials, etc. The nurse should know the principles underlying occupational therapy, so that in her future "specializing" or private duty she may have this curative agent at her command.

Remember that sick people magnify all interests, pleasant or unpleasant. A small success is a great triumph; any failure, a tragedy. Begin, therefore, with an occupation so easy that the product is sure to be a success; then gradually work up to more difficult and complicated things. The characteristics of a good occupation for the sick are: It must be (1) easy; (2) involve little or no chance of failure; (3) be interesting enough to hold the patient's attention; (4) involve movements that are beneficial; (5) produce something of value.

In choosing occupations for the sick: (1) Get acquainted and study the patient, to know her tastes. (2) Encourage her and get others to do the same. (3) Induce her to work with other people. (4) Remember that a product of indifferent value is better than idleness. (5) See that no occupation is carried to the point of fatigue.

Some occupations suited to children are:

Paper folding and cutting,	Cross stitch,
Coloring pictures,	Modeling,
Painting toys,	Simple weaving,
Cardboard houses or furniture,	Knitting,
Picture puzzles,	Word building,
Making scrap books,	Games,
Playing store,	Raffia work.

Some suited to women are:

Paper or ribbon flowers,	Stenciling,
Dressing dolls,	Hairdressing,
Planning new clothes,	Knitting or crochet,
Cards, especially solitaire,	Crochet or braided rugs,
Making surgical dressings,	Weaving.
Sewing, embroidery, or fine fancy work for short periods only.	

Some suited to men are:

Mechanical puzzles,	Netting or knotting,
Pierced brass work,	Basketry,
Mechanical drawing,	Typewriting,
Lettering with a brush,	Toy-making,
Indoor quoits,	Light woodwork,
Checkers, chess, dominoes, cards.	

The problem of securing materials to work with is one which deters most convalescents from doing anything.

All patients should have the opportunity to hear *music* occasionally. A borrowed victrola affords much pleasure. All should be supplied with books and magazines, of *the sort they like*.

Men who have been injured and who have in consequence a permanent disability should be seen by a social worker, so that they may, before they become lazy or discouraged, be helped to plan their future and begin training for it.

CARE OF THE DEAD

When the termination of disease is sad and death comes, the nurse must be careful to assume the proper attitude toward it. She should be in the room when a death occurs, attentive to the patient and ready to do



FIG. 82.—Roll supporting jaw.

whatever may be asked or needed, but should make her manner subdued and sympathetic and as unobtrusive as possible.

When dissolution has actually taken place, the patient's eyes should be closed, the limbs straightened, and the friends left alone for a little while.

After a short time, the nurse may return and begin the work of preparation for the undertaker. If the patient is a man, this is usually done by the orderly, but for a child or woman, the nurse attends to it.

If the eyes do not stay closed well, a very small piece of unsized paper put under the upper lid will help, or they may be covered with cotton wet with alcohol. The hair should be combed and braided. The entire body should be bathed with soap and water, and if the case

was a contagious or offensive one, followed by sponging with 1-500 carbolic solution. Turn the body but once in bathing and changing, while it is over on the side, pack the rectum with cotton, pushing it in with a smooth stick or an old pencil. Put into the vagina a small piece of cotton to absorb any discharge which may be there. In modern practice, rectal and vaginal packing are sometimes omitted, so that intestinal gases, discharges, etc., may escape. In such cases, a large cotton or oakum pad should be placed over the genitals, and fastened in place by a diaper. If there is a wound in the body, put on fresh dressings and fasten them with adhesive plaster.

Fasten the ankles together with a broad bandage, also the wrists, being careful not to draw them so tightly as to leave marks. Prop the shoulders and head higher than the rest of the body, so that the blood will not settle in them and discolor them. Brace the feet against the foot of the bed so as to keep them from dropping, and it will be easier to put the shoes on later. If the patient has a plate of false teeth, put them in place as early as possible or they cannot be gotten in. Do not bandage the jaw, as it distorts the features and gives the mouth an unnatural expression; place under it a firm roll of bandage or folded towel, large enough to hold the mouth well closed.

The clothing should consist of a clean nightgown or shroud, stockings, and a diaper. If preferred, drawers and undervest may be put on.

In large hospitals, it is required that a dead body be labelled with name, etc., plainly written and fastened securely.

REVIEW QUESTIONS

Discuss the spirit of night duty and its chief aim.

Give details calculated to secure rest and quiet for the patient.

Give special methods for inducing sleep.

Give points in the night nurse's care about her voice. Her step. Her manner. Her hearing.

Give suggestions for getting through with morning work.

Discuss the importance of using judgment and of being definite.

Give points in regard to the night nurse's care of herself in the matter of fresh air, rest, diet, and occupation.

Give points upon the care of convalescent patients, and tell wherein their care differs from that of very ill patients.

What is occupational therapy? What are its principles?

Name some occupations which may be done in the hospital by children. By women. By men.

Give in detail the care of the dead.

GLOSSARY

Adenoids, polypoid growths in the mucous membrane of the back of the nose and upper part of the throat.

After-birth, the popular name for placenta, cord, and membranes.

After-pains, intermittent and painful contractions of the uterus following delivery.

Affusion, a pouring upon, or sprinkling.

Alkali, a substance having characteristics opposite to those of an acid.

Alkaloid, the active principle of a drug (alkaline in character).

Amputation, the cutting off of a portion of the body.

Anteflexion, a bending forward (said of the uterus).

Anteversion, a leaning forward (said of the uterus).

Antiseptic, a substance which prevents the growth of bacteria.

Aseptic, free from bacteria.

Appendicitis, inflammation of the vermiform appendix. There may be pus formation, gangrene, or, perforation.

Appendectomy, removal of the appendix.

Atrophy, wasting of a part.

Auscultation, the act of listening to sounds produced by organs of the body, usually the heart and lungs.

Axilla, the arm-pit.

Bacteria, low forms of plant life. Germs. Microbes.

Benign, not malignant, non-cancerous.

Boric acid, the same as boracic acid. A mild antiseptic.

Bronchitis, inflammation of the lining mucous membrane of the bronchial tubes.

Cancer, }
Carcinoma, } a species of malignant tumor.

Cataract, a diseased condition of the lens of the eye, destroying its transparency. In operating for cataract, the lens of the eye is removed.

Cathartic, a drug to move the bowels; a purgative.

Cerebro-spinal meningitis, inflammation of the covering membranes of the brain and spinal cord.

Cervix uteri, the neck of the uterus or womb.

Cheyne-Stokes respiration, an undulating type of breathing.

Cleft palate, a defect due to imperfect development of the bones of the roof of the mouth.

Collapse, complete prostration of the vital powers.

Colostrum, the first fluid contained in the breasts.

Colic, a severe, griping pain in the bowels.

Coma, profound stupor.

Colon, the large intestine.

Communicable, contagious.

Conjunctiva, the covering of the eye-ball and lining of the eye-lids.

Conjunctivitis, inflammation of the conjunctiva.

Convulsion, a general involuntary paroxysm of muscular contraction.

Cornea, the transparent front part of the eye-ball.

Crisis, a sudden change. The turning point in disease.

Cyst, a cavity containing fluid and surrounded by a capsule.

Cystitis, inflammation of the bladder mucous membrane.

Diagnosis, the recognition of disease.

Dicrotic, a kind of pulse characterized by a double beat.

Disinfectant, a substance which kills bacteria.

Dorsal, pertaining to the back. *Dorsal position*, lying on the back.

Douche, a jet of water entering a cavity of the body or directed against a part.

Dropsy, a collection of fluid in the tissues or cavities of the body.

Dyspnea, difficult breathing.

Emesis, vomiting.

Endometritis, inflammation of the lining membrane of the uterus.

Excision, a cutting out.

Excreta, waste products discharged from the body.

Effervescent, giving off bubbles of gas.

Fallopian tube, the tube connecting the uterus and ovary.

Fecal matter, }
Feces, } the discharge from the intestines.

Fistula, an abnormal opening between two parts of the body.

Flexion, bending.

Formaldehyde, a gas used for disinfecting.

Formalin, a solution of formaldehyde gas.

Formula, a list of the names and quantities of the ingredients of a mixture.

Gangrene, mortification or death of a portion of tissue.

Gastritis, inflammation of the stomach.

Genitals, the organs of reproduction, classified as external and internal.

Genu-pectoral, pertaining to the knees and chest.

Germicide, a substance which destroys germs.

Goitre, an abnormal enlargement of the thyroid gland.

Gonorrhea, a contagious disease, due to a specific germ, characterized by the formation of pus.

Granulated lids, a contagious disease of the conjunctiva.

Gynecology, the science of the diseases peculiar to women.

Hemiplegia, paralysis of one side of the body.

Hemorrhage, abnormal flow of blood from a part; escape of blood from the vessels.

Hernia, an abnormal opening in the walls of any of the cavities of the body into or through which portions of organs protrude.

Hiccup, a spasmotic action of the diaphragm accompanied by a spasmotic closure of the glottis.

Hydrotherapy, treatment by the use of water.

Hypodermoclysis, the giving of salt solution under the skin.

Hysterectomy, removal of the uterus. *Complete hysterectomy*, removal of uterus, tubes, and ovaries.

Incision, a cutting into.

Incontinence, involuntary evacuation of urine or feces.

Infection, the communication of the germs of disease.

Involution, the return of the uterus after labor to its normal size and condition.

Iridectomy, excision of a portion of the iris.

Jaundice, deposit of bile pigment in the tissues of the body.

Labia, the folds of the external female genitals, inner and outer. *Labia majora and labia minora*.

Labor, the process by which the fetus and its appendages are expelled from the uterus at the end of pregnancy.

Lavage, irrigation or washing out of the stomach.

Leucorrhea, a whitish, muco-purulent discharge from the vagina.

Ligature, a cord or thread for tying arteries, etc.

Lochia, the vaginal discharge after labor.

Locomotor ataxia, a disease of the spinal cord.

Mania, a form of insanity marked by exaggerated nervous action.

Meatus urinarius, the opening into the urethra.

Meconium, the first fecal discharge of the new-born.

Metritis, inflammation of the uterus.

Meningitis, inflammation of the membranes of the brain.

Menstruation, the monthly flow from the uterus.

Multipara, a woman who has borne more than one child.

Myoma, a muscular tumor.

Nephritis, Bright's disease. Inflammation of the kidney.

Neuritis, inflammation of the nerve trunks.

Ophthalmia neonatorum, inflammation of the lining membrane of the eye-lids, due to gonorrhreal infection.

Oöphorectomy, removal of an ovary.

Otitis media, middle ear disease.

Ovariotomy, removal of an ovary, especially of a large ovarian tumor.

Paralysis, a disease of the brain due to pressure from a clot and characterized by loss of power.

Paraplegia, paralysis of the lower half of the body.

Percussion, light tapping on any part of the body for diagnostic purposes.

Perineum, the body of muscle between the vagina and rectum.

Perineorrhaphy, suturing or repair of the perineum.

Peritoneum, the lining membrane of the abdomen.

Peristalsis, undulating movements of the intestines.

Pessary, an instrument placed in the vagina to support the uterus.

Pleurisy, inflammation of the pleura or lining membrane of the chest.

Pneumonia, inflammation of the lung substance, due to infection.

Post-partum, occurring after labor. *Post-parium hemorrhage*, hemorrhage following labor.

Precipitate labor, very rapid labor, the stages not being defined.

Ptomaine poisoning, infection of the intestinal tract by the products of decomposition, usually of food.

Recto-vaginal fistula, an abnormal opening between the rectum and vagina.

Regurgitation, the flowing back or rejection of the contents of an organ.

Resection, excision of a portion.

Retroflexion, a bending backward (said of the uterus).

Retroversion, a leaning backward (said of the uterus).

Salpingitis, inflammation of the Fallopian tube.

Salpingectomy, removal of the Fallopian tube.

Salpingo-oöphorectomy, removal of tube and ovary.

Sordes, the brownish deposit that accumulates upon the teeth in disease.

Subcutaneous, the same as hypodermic; under the skin.

Suture (in surgery), a stitch.

Tachycardia, abnormal rapidity of the heart, coming in paroxysms or attacks.

Tetanus, lock-jaw; an infectious disease characterized by muscular spasm, particularly of the lower jaw.

Tonsillitis, inflammation of the tonsils, due to infection.

Trachoma, (granular lids), a contagious disease of the eye-lids.

Tuberculosis, an infectious disease produced by the bacillus tuberculosis, affecting most often the lungs.

Tumor, an abnormal growth in any part of the body.

Typhoid fever, a general infection, characterized by ulceration of the intestines.

Uremia, toxic condition, due to lack of elimination.

Urethra, the passage from the bladder outward.

Uric acid, an acid normally found in small quantities in the urine.

Uterus, the womb.

Vaginitis, inflammation of the vagina.

Vesico-vaginal fistula, an abnormal opening between the bladder and vagina.

Vulva, the external female genitals.

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